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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, to maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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THE ANTHONY POLLOK PRIZE.

The subjoined remarks in relation to the Anthony Pollok Memorial Prize are taken from the London Shipping World of September 25th. It is greatly to be regretted that the devices for increasing safety at sea exhibited in this second international competition were not of a character to entitle any of them to an award.

"As we pointed out in our last issue, the result of the recent competition for the Anthony Pollok Memorial Prize, which opened at Havre on the 9th inst., was such that the jury could not see their way to allot the prize to any of the exhibitors.

"For this exhibition it has been decided to limit the devices, to be eligible for a prize at the competition, to those fulfilling at least one of the following three conditions, viz.: 1. To prevent collisions at sea. 2. To save the ship in case of collision. 3. In case the ship is abandoned, to save the passengers and crew collectively. The programme for this year's competition informed competitors that experience had already condemned devices and apparatus which could not be relied upon in case of accident, owing to the limited number of the crew on merchant vessels, and also that the proposed apparatus and devices should not so encumber the decks as to seriously interfere with the vessel's character as a freight-earning implement. It was therefore decided to exclude from the second competition all inventions which were simply improvements or modifications of appliances already recognized as being insufficient for the purpose of saving the passengers and crew collectively; also rafts which had to be mounted or inflated at the time of accident, as well as hatch covers, deck houses, etc., supposed to float automatically on the sinking of the ship.

"The second international competition was attended by inventors from all parts of the world, even India and China being represented amongst the exhibits. The demonstration was held in one of the large custom house sheds on Quay de Marseille, in Havre, which was richly decorated with flags and emblems, and otherwise well adapted for its purpose. The list of competitors comprised 120 French, 71 Germans, 28 Englishmen, (including inventors from the British colonies and India), 16 American, and 93 inventors from other countries, making a total of no fewer than 328 exhibitors. The exposition was exhibited under the auspices of the Chamber of Commerce of Havre, with the able assistance of Captain S. Dechaille, head of the signal salvage station.

"After a most careful examination of the exhibited plans

and designs, a practical demonstration of the capabilities of the various life-boats and rafts in the port of Havre, the committee unanimously declared that they could not see their way to allot the prize for any of the exhibited devices, although they admitted that several serious efforts had been made by some of the exhibitors to increase the safety of life at sea."

REVENUE CUTTER SERVICE.

In regard to the Revenue Cutter Service Senator Frye has to say:

"A bill was reported at the last session from my committee in regard to that service, but there was not time to consider it. The main feature of that bill was the provision for the retirement of officers on a level nearly with the Navy. Now there is no such thing as retirement for revenue cutter officers, and therefore the head of that service gets all closed up. Several years ago I succeeded in getting an amendment in an appropriation bill retiring about thirty officers of the Revenue Cutter Service. Some of them were 80 or 90 years old, and many of them were broken down from wounds received in the civil war, and there they were. No Secretary of the Treasury would put them out, and they stood in the way of active men. I got them all retired, but the service is getting into the same condition again, and there should be a permanent system for their retirement. This is one of the best services in the entire country. These officers are the hardest worked, most exposed and do the least loafing. They are at it all the time. Whenever there is a war, they are on a par with the Navy." At least Senator Frye thus thinks.

MEDALS FOR HEROISM.

Milwaukee branch of the Licensed Tugmen's Protective Association, ordered four medals for the crew of the Columbia, which rescued Thomas Murphy and George McGinnis, the second engineer and fireman, respectively, of the lost steamer Baltimore, from a piece of wreckage in Lake Huron in the midst of a heavy gale. The men who received the medals were Capt. Joseph Marks, Herbert H. Eckmott, William Cook and Lester Leonde. The medals are of gold and will be sent with a letter to Detroit and there presented.

The rescue of Murphy and McGinnis was one of the most courageous deeds ever noted on the lakes and the Milwaukee lodge of tugmen sent the initiative in recognizing acts of bravery among their fellows on the lakes.

The United States Life-Saving Service, or some local humane society might sometimes recognize bravery but it appears they don't and so it is left for one citizen to reward another in the expression of his sentiments.

A GOLD medal has been awarded the Continental Iron Works of New York, Borough of Brooklyn, for the Morison suspension boiler furnaces exhibited at the Pan-American Exposition. These furnaces are in great favor for land and marine boilers. Their form of construction offers the greatest possible resistance to distortion or collapse and a freedom from leakage not to be obtained in furnaces which consist of sectional flanged and riveted cylinders, with reinforcing rings interposed between the flanges, or any other method. The Continental Iron Works are the sole manufacturers in this country of the Morison suspension furnaces.

THE fact that Senator Frye, of Maine, has had a conference with President Roosevelt at the latter's invitation, to talk over prospective legislation, may be accepted as a favorable straw to show how the wind is blowing for American shipping.

PACIFIC COAST ENTERPRISES.

Our Canadian friends talk this way: "It is natural for us, more especially in the eastern and maritime provinces, to devote the major part of our interest and attention towards securing our rightful share of the traffic across the Atlantic with Europe, but we must not forget that Canada is washed by two oceans and that there is an important trade awaiting us in the west, if we do not suffer others to step in before us. Some little time ago we called attention to the aspirations of our American friends with regard to the control of the Pacific commerce, and the contempt with which they regarded our prospects in that direction, and more recently we referred to these as an additional reason for our bestirring ourselves to obtain a rapid service across the Atlantic by making terms with the Canadian Pacific Railway, which has already a line of steamers running to the far east, and would thus have an almost continuous line of water and rail around the globe, and be better able to compete with the powerful combinations which are springing into existence to the south of us. We have, indeed, some good idea of the keen competition which is going on in Atlantic commerce, but few of us have any idea of the extent to which this is being prepared for us in the Pacific Ocean, and we, therefore, reproduce a very able and clearly written article published some time ago in the Toronto World on this subject. Our confrere says:

"These are the developments that are under way from the American side of the Pacific. There will be other extensions to the Pacific coast of British lines now terminating at Asiatic ports. It is stated that the China Mutual Steam Navigation Co. an English corporation, has decided to extend its Liverpool-Yokohama line to Seattle. A monthly sailing will be established each way between Liverpool and Seattle, calling at Mediterranean and Asiatic ports. In time it is quite possible that the C. P. R.'s steamers may cover the same route. All that will then be necessary to give the big Canadian corporation a continuous service around the world will be the establishment of a steamship line across the Atlantic. It looks as if the C. P. R. will be the first company to belt the globe with a combined rail and steamship service."

JOHN W. MACKAY's proposition to lay a cable across the Pacific Ocean, submitted in behalf of the Postal Telegraph and Commercial Cable companies, indicates a great change in sentiment. At the last session of the United States Congress two companies were competing for this privilege, but each wanted government subsidies. A bill was finally drawn in which the government agreed to pay not to exceed \$300,000 a year for twenty years for its business, or a total of \$6,000,000, half of the estimated cost of construction. But nothing came of this. Now Mr. Mackay simply asks that authority be given his company to land cables on the shores of the United States, Hawaii and possessions in the East. No concessions, subsidies or indemnities are asked. The companies agree to begin at once the work of construction, and will give a guarantee to have the cable in working order between San Francisco and Honolulu within nine months from the time work is begun. The entire cable is to be maintained without cost to the United States, the company agreeing that the business of the government shall have at all times the right of way, and in case of war or other public necessity the line may be taken over by the government. It is also agreed that the present rates shall be reduced from forty to sixty per cent. It is claimed that it is competent for the executive department to grant the privilege sought of landing cables without the intervention of Congress. The matter has been laid before the State Department, and if it be found that the authority sought can be granted, it probably will be.



BUFFALO.

Special Correspondence to The Marine Record.

The coal rate still remains at the figures given last week. There is a lack of cars from the mines, and with plenty of tonnage, 60 cents to Lake Michigan and 35 cents to Lake Superior, with no immediate indication of any improvement, although the Lake Superior rate is firm.

The funeral of James W. Brooks, chief engineer of the Western liner Commodore, took place on Friday afternoon. The pallbearers were members of the Marine Engineers' Beneficial Association. Floral tributes were sent by the engineers and also by the officers of the Western line.

The position of the schooner Paisley, stranded on Horse-shoe Reef, was unchanged on Wednesday. The wind has died down and the schooner is not pounding so hard, but it is not likely that she will eventually break up. The boat lies in such a position that tugs cannot reach her to be of proper assistance.

A survey on the steamer W. H. Gratwick, which grounded in the harbor this week, shows that her damage is much greater than was at first supposed. The shoe and wheel are broken and the rudder post is twisted. The work of transferring her coal cargo to the steamer Chili will take until Thursday. The underwriters refused to allow the Gratwick to proceed with her cargo to Milwaukee in her present condition.

The officers of the Northern Steamship Co. have expressed themselves as well satisfied with the business results of running their boats, the North Land and North West, to Chicago instead of Duluth. Upon this it is said that they will continue the boats over this course another year. The steamship Miami, which ran this season from Mackinaw to Duluth, augmenting the other service, will, it is suspected, perform a similar service next season.

This week the light-house tender Haze cleared for the last of the season's inspections on Lake Erie and Detroit river. This work has already been completed on Lake Ontario. This inspection will occupy about two weeks, and following that the taking up of the buoys will begin, commencing at this end of the lake and ending at Detroit, where the Haze will be laid up for the winter, thus being able next spring to follow the ice down. By doing this the lake's buoys are practically all in place when navigation is open. This is according to the best practice of the Light-House Board, and the experience of the district officers.

The following well-known firms doing business in marine circles were awarded gold medals for their exhibits at the Pan-American exposition: Gas Engine & Power Co. and Charles L. Seabury & Co., Morris Heights, New York City, launches, engine models. International Navigation Co., Philadelphia, Pa., models of steamships. Horace See, New York City, ash ejector. The Continental Iron Works, Brooklyn, New York, welded steel boilers and flasks. Chicago Pneumatic Tool Co., Chicago, ship-construction tools. American Ship Windlass Co., Providence, R. I., automatic towing machine. Lidgerwood Manufacturing Co., New York City, electric ship's winch and apparatus for coaling ships at sea. Safety Car Heating & Lighting Co., New York City, gas lighting for cars and buoys. E. S. Ritchie & Sons, Brookline, Mass., ships' compasses.

The W. & A. Fletcher Co., of Hoboken, have contracted to build a new twin-screw yacht designed by J. Beaver Webb for W. S. Spaulding and brother, of Boston. The yacht will have a speed of 15 knots an hour, and is to be completed about May 1, 1902. In appearance the yacht will resemble the Corsair, which this firm also built for Mr. Morgan. Her dimensions will be as follows: Length on water line, 162 feet; length overall, 200 feet; and beam, 24 feet 6 inches. The indicated horse-power is to be 1,200, and she will be fitted with triple-expansion engines and Yarrow water tubular boilers built for 225 pounds of steam. The Messrs. Fletcher will also construct the Newark, the new ferryboat for the Pennsylvania Railroad, which will be 206 feet long, 65 feet beam, 17 feet draft. Thos. S. Marvel & Co., Newburg, N. Y., says the New York Marine Journal, will doubtless build the hulls for both vessels.

CHICAGO.

Special Correspondence to The Marine Record.

Capt. John Pardee, who resigned as master of the steamer Soo City, of the Graham & Morton line, has been appointed master of the Goodrich steamer Atlanta.

The launch of the Fred B. Wells, the fourth steamer of the Peavey fleet, marked the completion of the fiftieth boat by the Chicago Ship Building Co., at South Chicago, in 12 years.

The Link-Belt Engineering Co. have received from the Baltimore Storage & Distributing Co., of Baltimore, Md., an order for a wholesale coal pocket or storage plant of 3,000 tons capacity. This will include the full equipment, which will have a capacity of handling 75 tons of coal per hour.

The Dunkley Transportation Co., of Chicago, is figuring on establishing a line between Milwaukee and east shore ports. According to the present plans, the steamer Petoskey will make regular trips between Milwaukee and Manitowoc on the west shore and Muskegon and Ludington on the east shore.

The Peabody Coal Co., 215 Dearborn St., whose coal dock at North Market St. and the river was destroyed by fire recently, has made arrangements with Mr. John T. Connery, manager of the Y. & L. Coal Co., whereby anthracite coal will be handled over the dock of the latter company at North Branch St.

Grain freights are quiet and the market seems to be acting quite strange for this season of the year. The going rate now is 1 1/4 cents on wheat to Buffalo, and this means 1/8 cent less on corn; which, considering the extra wear and tear to vessel property during the fall, is not a paying rate, yet nothing better is in sight at the present.

In the future Brig. Gen. Oswald H. Ernst, Corps of Engineers, U. S. A., will supervise the work of improving the river and harbor of Chicago and vicinity. Major Willard, who has been in charge, will now take up the duties of overseeing the improvements of the Illinois and Mississippi canal and the Illinois river and its locks.

When the wooden steamer C. B. Lockwood is released from North Point, Milwaukee Bay, it is safe to say that her several days pounding will cost the underwriters no small sum. The vessel was built at Quayle's yard in Cleveland, and well built at that, but she has never had the best of luck and this last dash will ask for a general rebuild.

The steamer State of Michigan of the Barry line foundered in Lake Michigan Friday last, fourteen miles north of Muskegon. The Muskegon life-saving crew assisted in getting the Michigan's crew to shore. The steamer was en route for Manistee to run in the salt trade between there and Chicago. The State of Michigan was recently put on the east shore route after running in the passenger business between Milwaukee and Chicago.

The Chicago Pneumatic Tool Co. has purchased a license under the Moffet patent No. 369,120, on portable drilling machines. After consulting leading patent attorneys and looking into the matter with the greatest care, they became convinced that all portable power drills on the market are infringements of that patent. In order, therefore, to protect their customers as well as themselves from litigation and expense, they have made the agreement which covers all the drills which they have sold or may sell in the future. Their customers, therefore, need have no further apprehension on the subject.

The steamer Wiley M. Egan, loaded with coal for Schenck's dock, at Thirth-fifth street, in the south fork of the river, went hard aground some distance away from the dock, Sunday evening, and despite the efforts of five powerful tugs was not floated. The Egan was drawing 16 feet 11 inches forward when she left Buffalo, and it was easily seen that a draft of six inches less would have been ample for the draft of water in the south fork. She was eventually floated and proceeded to her discharging dock. Vessels may be warned not to expect anything more than about 16 1/2 feet up to the Schenck's dock.

The post-mortem examination, held on the body of Mate Michael H. Finneron, of the steamer Arthur Orr, developed the fact that his death was due to concussion of the brain. The inquest was continued until October 30, in order to allow time to bring in Capt. Joseph Brownell, of the Arthur Orr. It was also shown in the examination that Finneron had a weak heart, probably brought on by drinking. Finneron died at the County Hospital last Thursday night after he had been removed from the steamer Arthur Orr. It is said that Finneron had a dispute with Capt. Brownell, which ended in the mate being struck to the deck. He lost consciousness, and was taken to the hospital in that condition, and never regained his senses.

CLEVELAND.

Special Correspondence to The Marine Record.

Still there is talk of more new shipbuilding contracts, although nothing can be specified for delivery until well along next season.

The steamer William S. Mack, built at the Lorain yards of the American Ship Building Co. registers 3,320 tons gross and 2,875 tons net.

The new steel steamer Yosemite struck something harder than her shell plates when just above the "Soo" and is now in drydock at Lorain for repairs.

Capt. Alex. Beggs, of the steamer John Mitchell, leaves for Scotland this week to settle up some business affairs. It is expected that the cruise will last about five weeks.

Capt. S. M. Murphy has resigned as master of the steamer Corona, of the Pittsburg Steamship Co., and Capt. C. E. Copeland, of the barge Maida, will take command of the steamer.

There is now a rush of work in the general cargo carrying trade, and line managers find that they have not any too much tonnage at their command. It is probable that contracts for new vessels would be placed if early delivery could be promised.

While \$1.00 is the going rate from the head of the lakes, a slight struggle is being made for 90 cents from Ashland. Escanaba is paying 70 cents to Ohio ports and 75 cents asked to the furnace at Buffalo. Charters ahead at 3 1/4 cents from Port Arthur or Fort William are not being filled owing to a lack of grain being sent forward.

Our friend John C. Fitzpatrick, formerly of Buffalo, N. Y., and Cleveland, has recently become proprietor of the well-known Hotel California, Second and Hill Streets, Los Angeles, Cal., has refitted and refurnished the house and placed it in first-class order. Knowing "Mine Host" of the California well, we can guarantee our friends a hearty welcome at his home near where the sun sets.—Marine Journal, New York.

Lorain is fast forging to the front as a shipbuilding point. The keel of the large steel cargo steamer W. S. Mack was laid and the hull ready for service in ninety days. In ordinary construction, the American Ship Building Co. may soon be in a position to build by the mile and cut off any desired length. At the same time, there is nothing afloat better built than the hulls turned out from the yards of the American Ship Building Co.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau for the week ending Oct. 23d: Prevailing wind direction during the week, south; highest velocity, 55 miles from west on Oct. 17th; mean temperature for the week, 51°; highest temperature, 76° on Oct. 23d; lowest, 35° on the 21st; sunrise and sunset data computed for local time: Oct. 24th, sun rises, 6:24; sets, 5:05; Oct. 27th, sun rises, 6:28; sets, 5:01; Oct. 30th, sun rises, 6:31; sets, 4:58.

A marine recruiting station has been opened at 155 Ontario street by Capt. J. E. Mahoney, who is in charge. An opportunity is now offered to able-bodied men who desire to enter the service. Enlistments are for four years. This time is divided between shore duty and duty at sea on board naval vessels. Applicants for enlistment who are between the ages of twenty-one and thirty-five years, five feet and four inches to six feet and one inch in height, of good moral character, in good physical condition, not married, and able to read and write English, will be accepted.

Capt. Cyrus Sinclair, the general manager of the Great Lakes Towing Co., says that a mistaken impression of his intention had been given when it was stated that a general shakeup would follow his appointment to succeed Capt. Collier. We are going to have civil service on our tugs, and as long as a man behaves himself and does his duty, he is safe. There will be no general shift, or switching around, but we are going to keep a close tab on everything. There will be no slip-shod work, no shirking duty; but as long as a man does what he is employed to do, he need not fear for his position, in so far as I am concerned.

A report was made to the Pittsburg Steamship Co. by Capt. A. R. Robinson, of the steamer Crescent City, stating that he had made the distribution of the reward money to the members of the crew for the rescue of the crew of the M. M. Drake, as directed by General Manager Wolvin, who sent it to the "Soo" for him. According to the instructions of Mr. Wolvin, Captain Robinson received \$300, the chief engineer \$100, the second engineer \$50, the first mate \$50, the wheelmen, watchmen, and lookouts \$15 each and all others \$10 each. The aggregate expense was \$755, as the

crew of the Crescent City numbered at the time of the disaster to the Drake, twenty-four men.

When the steamer Maricopa started away from here on Tuesday some irregularities had been detected in her clearance papers. These made her liable to a fine of \$20, which was imposed by the customs officials. When the customs officer went on board to collect the fine the master was absent and the mate refused to pay the bill and ordered the government official to the dock. While the latter was going back to the office to report, the Maricopa sailed for Conneaut. Her master, Capt. H. Zealand, was surprised there to be refused clearance papers until he should settle for the fine imposed in Cleveland. This refusal was based on instructions received from the Cleveland office. Capt. Zealand paid the money and obtained his papers. The Maricopa is one of the boats of the Pittsburgh Steamship Co., and Capt. Zealand is one of the most experienced and best vessel masters in the lake trade.

Several cargoes of ore were placed this week at the \$1.00 rate from the head of the lakes. Iron ore is still king in the lake freight market, and in touching on the finished product the Iron Trade Review says: Lake shipyards continue to do their share in appeasing the hunger of the plate mills. This is still the only department of the market that shows any slackness, and it is rather on sheared than universal plates, the mills rolling the latter being comfortably supplied with tonnage. Material for two vessels was placed in the past week, plates and shapes together amounting to about 2,700 tons. Boiler works and the general plate consuming trade are having little trouble about deliveries now, being able to turn around in less than a week. The structural mills are very full of work, the outlook for next year in this line being second only to that for the rail mills. In the past two weeks there has been a good run of business through Cleveland offices, contracts for shapes, deliveries in the next four or five months having been closed in the fortnight for 7,000 or 8,000 tons.

DETROIT.

Special Correspondence to the Marine Record.

The Hugoma, built at the Wyandotte yards of the Detroit Ship Building Co., registers 2,182 tons gross and 1,284 tons net.

The steamer Henry Steinbrenner, built by the Jenks Ship Building Co., at Port Huron, for Cleveland owners is registered at 4,719 tons gross and 3,955 tons net.

A vessel owner, and one of our most conservative, says that since Escanaba iron ore has gone to 70 cents, Marquette ought to be quoted at 85 cents to 90 cents.

The sand sucker Companion, which sank in eight feet of water, nine miles below the St. Clair cut in Lake St. Clair, after striking a rock last Friday, has been raised after divers had patched up the hole in her hull. She will go into dry dock here.

The D. & B. Line boats will be quite in evidence next season, as the first boat will be launched next month, and with two large, speedy passenger and cargo steamers between here and Buffalo transportation will no doubt take on a different phase.

Capt. James G. O'Neil, of the tug Miner, died at Windsor last Friday night, aged fifty-two years. He was born on Bois Blanc Island, and was at one time river reporter, saving in that capacity some twenty-five lives. He is survived by his wife and two children.

And now comes along the report that Messrs. Bottsford & Jenks, of Port Huron, will build and operate a shipyard for the construction of modern steel steamers. They have the Duluth contract with the Grand Trunk Railway Co., and the first work will be five steel cargo steamers for themselves, although they will not stop at building vessels for their own service. My informant appears to be strictly reliable, although it is hardly creditable that this firm will enter the field of shipbuilding even with the initial order for five steel boats.

We have been troubled considerably this week with low water in the river, and it now seems as if lock gates would be necessary in the near future at the Limekiln Crossing, as well as across the American channel. The government engineers in charge of the waterways should think up some plan whereby the commerce of the lakes need not be delayed day after day on account of a few inches of water. They, or their chief, gave permission to tap the supply by opening the Chicago canal and they ought to be able to do something to offset their former action in this matter.

The local organizations of the Marine Engineers' Benevolent Association are affiliated with the International Longshoremen's Association. Secretary-Treasurer Henry C. Barter has issued charters to the engineers' locals at Cleveland and Ashtabula, making them full members of the International. This is the first step in the direction of bringing all the various unions connected with handling and the commerce of the lakes and coasts under one working head. It is following out the policy of the longshoremen in convention at Toledo, when it was decided that it would be more advantageous to all concerned to unite under one organization than to be seeking the same ends through the many individual locals of the different interests.

General Manager Carter, of the D. & C. line, says that the damage to the passenger steamer City of Cleveland by Sunday's accident would amount to at least \$25,000. It is to be regretted that Capt. Archie McLachlan should have had such trouble with his boat, although not the slightest blame can be attached to his handling and anchoring the craft where he did. There is an opinion among some vesselmen that the steamer struck the hulk of the old sunken steamer Julia, which sank in the vicinity of the disaster with a cargo of stone about forty-five years ago. The boat will not be put into service again this season. The dining room, into which the water poured, will have to be practically refurnished and decorated anew, in addition to the general hull and other damage done to the steamer.

The investigation of the steamboat inspectors into the Hudson disaster has resulted in a complete exoneration from blame for Capt. McLean of the steamer John M. Nicol, which passed by the Hudson shortly before she foundered with all hands on Lake Superior. After reviewing the testimony, the inspectors have found that Capt. McLean would have risked his own boat and crew, as it was shown that the Nicol could not be kept on her course and that after reaching shelter in Bete Grise bay it took forty hours to pump the water from her hold. The inspectors remark: "The only ground for censure is the fact that McLean on arriving at Bete Grise did not report the distress of the Hudson to the steamer Buffalo then in shelter in the bay." However, it is the opinion of the inspectors that it would have been fruitless for the Buffalo to have ventured out, as the Hudson undoubtedly went down soon after being sighted by the Nicol, and the Buffalo could not have reached her for several hours.

DULUTH-SUPERIOR.

Special Correspondence to the Marine Record.

The nominal wheat rate is at 2½ cents to Lake Erie with little or no chartering being done.

The Hobart Iron Co., of Duluth, Minn., has increased its capital stock from \$100,000 to \$300,000.

The Government breakwater at the Portage lake ship canal has just been completed, at a cost of \$325,000. The structure is 5,480 feet long, and was commenced four years ago.

The Western Transit Line steamer Mohawk cleared from Dollar Bay, on Saturday last, with a cargo of 2,800 tons of copper, valued at \$952,000. Several years ago the Emily P. Weed carried 2,400 tons in ore cargo from Lake Linden.

From this end of the line nothing very bullish can be discerned in the freight situation, certainly nothing in the immediate future. Whatever November has in store, 300 cars of grain a day does not call for much vessel room. There are, however, two or three factors that may operate to give freights a boost during next month.

An opinion in the celebrated iron case, involving several hundred thousand dollars, was handed down by Circuit Judge Stone, at Marquette, a few days ago. It sustains the contention of complainants and grants a perpetual injunction. Edward Breitung and the Negaunee Iron Co., brought suit to restrain the Cleveland Cliffs Iron Co. from mining ore on lands at Negaunee, owned by complainants, the defendants setting up the claim of the right to do so under a lease granted in 1857 for ninety-nine years to the Pioneer Iron Co., and whose interests the Cleveland Cliffs Co. had acquired. It is held by the judge that when the Pioneer Co. went out of existence its lease expired, and that operations under its terms is trespass, accordingly the temporary restraining order is made permanent.

There has recently been completed at Meaford, the Collingwood branch terminus of the Grand Trunk Ry., on Georgian Bay, 480 miles by steamer from Chicago and 430 miles by rail from Montreal, what is said to be the fastest

single leg marine elevator on the lakes. It has a working house of 150,000 bushels and the storage annex of 600,000 bushels. The foundation is of concrete and the deck is a solid concrete pier 28 feet deep. The floors also of the elevator are all concrete, while the superstructure is of laminate work. The bins are built of 2x8, 2x10 and 2x6 hemlock timbers, the balance of the timber being Norway pine. The elevator is entirely covered with corrugated elevator siding, painted black. The marine leg is of steel, with capacity of 15,000 bushels per hour. The inside lifters have cups 32x7x8 ins., the belt traveling 700 feet per minute. There are four conveyors made of 40-inch rubber belting, traveling 1,000 ft. per minute, and there is a full equipment of steamship shovels. The elevator drives by rope transmission throughout. There are four 1,200 bushel hopper scales of new pattern, adjustable, and four bifurcated loading spouts for loading cars, with track room for loading 200 cars per day of 10 hours.

LETTERS AT DETROIT MARINE POST OFFICE.

OCTOBER 23, 1901.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Barr M. A., Str. Tower	Mercier Calixte, Str. German
Bacon J. hn	Marcero Alex., Str. Marina
Baxter David	Morton Capt. D. J.
Brown D.D., Queen of Lakes	Murney W. J., Str. Curry
Brown Edward, Str. Oglebay	Martin Thos., Str. Marquette
Craig John, 3, S. Mitchell	Merritt S. W.
Cole W. H., 2, Str. Menda	McCroe Kenneth, Str. Oglebay
Carswell Thos. C., Str. Tower	McCrae A. R., Str. Oglebay
Clements Bert. T., R. Richards	McLoud Dan, Str. Carrington
Clark Capt. Chas. T.	Nall Forest
Dwyer W. J., Str. Westford	Parent Cecile, R. Holland
Foley John, Str. Morden	Price Albert
Granger Mary, Str. Embury	Palmer Roy D.
Gullinrey Mrs. Geo., Str.	Parks Percy, 2
Oglebay	Pointney John, Str. R. Fulton
Graves Hector, Str. Oglebay	Russell Garrett, Str. S.
Goodrich Mrs. C. M.	Mi chell
Green Geo.	Rano John, Str. Ida E.
Greer Miss M. E., Queen of Lakes	Ramsay John F., Str. R.
Hinslea Capt. C., Str. German	Richards
Harrison John, 2	Riley Robt.
Holbrook Arthur, Str. Blaine	Runser Mrs. F. D., Str. Curry
Hinckley P., 6	Scott Henry, Str. Oglebay
Hough Tim, 2, Str. Naysmith	Samson Adam, 2, Str. Colonel Sawyer Carl, 2
Henderson Geo., Str. Vance	Smith J.
Humphrey B., Str. Sturges	Smith Samuel
Hillman E. C., 2, Str. German	Svensson C., Str. B. W. Parker
Hansen Martin	Stevenson W., Str. R. Richards
Kerr Arthur	Sheppard H. W., Str. Marguerite
Kennedy Edw.	Smith Harry, Str. Queen of West
Korson J. M., City of Cleve- land	Secord J. M., Str. Menda
Kulm Henry	Tischner Geo.
Knox James, Str. Manola	Thrall Geo. C., Str. Lucy
LeRoy David, Str. Norton	Toles Geo.
Larson Louis, Str. Bradley	Warren Albert C., Str. 127
Locke Fred	Wilson Geo. B.
Lockhart Fred, Str. Andaste	Weber John W.
Lawrence Chas. E.	F. B. DICKERSON, P. M.

Capt. John Anderson, master and owner of the small schooner Sofa Fournier, was lost overboard from his vessel and drowned. The accident occurred in the vicinity of Hog Island. About 7 o'clock in the evening the schooner was headed for shelter near the island, when her head sails were blown away. It was while trying to save his vessel that Capt. Anderson was lost. It is thought he was struck by the main boom and knocked over the side. The little boat was left with only one man on board and drifted helplessly until picked up by the steamer Marquette. Capt. Anderson was a highly respected man and a good sailor.

A deal was closed October 15th between C. A. Harp of Stockton, Cal., and the Mitchell Land Co., by which Everett has acquired another shipyard. For several months negotiations have been pending between Harp and the Everett Chamber of Commerce over a site on the banks of the Snohomish river. The purchase consists of six lots near the mill of the Thomas Robinson Lumber Co. Here, within the next few months, will be erected a well appointed shipyard, having facilities for building mammoth dredgers, which the new company expects to make its chief industry, though steam and sailing craft also will be built.

BUREAU OF NAVIGATION REPORT.

Owing to the lack of vessels of smaller types in the North Atlantic Squadron, it has been necessary to divert training vessels from their cruises of instruction in order to afford necessary protection to our interests, particularly in the Caribbean Sea, and this, in the opinion of the Bureau, emphasizes the necessity of commissioning at least two light-draught gunboats for this squadron. The battleships on the North Atlantic Station now number three, and, with the addition of the Illinois in the early autumn, will be increased to four, a number which, the Bureau believes, should at all times be retained in commission on that station, as being a tactical group, and further necessary from the standpoint of adequate preparation for defense.

During the autumn of 1900 the British North American squadron was received at Bar Harbor, Me., by the vessels of this squadron, it being the first visit of a British squadron to the United States for several years.

The usual cruise along the Windward Islands and the North coast of South America was omitted on account of the length of time spent in the Gulf of Mexico. During the past summer Nantucket and Vineyard Sounds were the scenes of the cruises of this squadron, a part of the coast not previously visited by the vessels of the fleet.

It is the belief of the Bureau that the South Atlantic station should be re-enforced at an early date by at least two vessels.

Among the incidents which might be mentioned in connection with the campaign for the relief of Pekin during the summer of 1900, the Bureau takes great pleasure in calling attention to the case of two British seamen, Herbert George and Edward Turner, who, at the risk of their lives, rescued a junk loaded with wounded American seamen.

The campaign in the Phillipines, so far as concerns the Navy, has consisted almost entirely in co-operation with Army expeditions against the insurgents, in which, as evidenced by the reports of all Army officers concerned, the naval vessels rendered invaluable assistance. A further check upon the insurgents has been the rigid system of patrol carried on by the smaller gunboats, which has materially hampered the inflow of arms and ammunition to the islands. Among the many expeditions which might be mentioned, the one for the capture of Aguinaldo, in which the Vicksburg, commanded by Commander E. B. Barry, U. S. N., took part, must be considered as undoubtedly the most successful. General Funston in his report states that without the services of the Vicksburg he could have done little or nothing.

It is recommended that the appropriation for the collier system be placed under the Bureau of Navigation.

The preparatory work for the selection of a site for a naval station in the Philippines has been carried on by the officers of this fleet, and a site has finally been decided upon at Olongapo in Subic Bay, and practically co-incident with that selected by the Spanish government.

The system of manning naval colliers with merchant crews was successfully inaugurated by this Bureau during the last fiscal year. Two stations for the training of apprentices—i. e., Newport, R. I., and San Francisco, Cal.—have been considerably benefitted by the erection of several new buildings and by the completion of various other improvements. At Newport the number of apprentices has been larger than ever before, on June 30, 1901, 1,128 boys being present, and at San Francisco 250 apprentices in addition to 230 landsmen for training.

The policy of enlisting landsmen from various parts of the United States has been pursued as heretofore, but with considerably increased facilities. Recruiting parties despatched to various parts of the United States, in the Mississippi Valley and to the eastward have met with uniform success. Landsmen to the number of 4,198 have been enlisted; of these 3,141 men have been transferred. The Bureau has now undertaken a scheme having a still wider scope, that is the establishment of a training station for landsmen to which these men shall be sent instead of to the receiving ships as at present. The Port Royal Navy yard has been removed to Charleston; an excellent site was made available there.

The Wasp has been assigned to this station for the purpose of giving the landsmen practice with small-caliber, rapid-fire guns and for such other service as may be useful. The station when completely equipped will accommodate about 1,000 men. The department has assigned the battleship Indiana to this duty, and is also about to commission the Prairie, now under repairs at Boston, and the Panther,

under repairs at League Island, making in all ten vessels so employed. It is believed that by this system about 3,500 men a year can be comfortably handled and well trained.

The Bureau has continued in operation its plan for the training of seamen to be gun captains, 58 men having by this method been qualified as gun captains, and they have been almost uniformly found to be efficient and serviceable. A certificate as gun captain is not issued to a man unless he shows ability as a leader of men in addition to his qualifications as a gun pointer.

In the year ended June 30, 1901, 32,311 men and 6,687 apprentices applied for enlistment. Of the men 8,115 and 1,781 apprentices were accepted—a total of 9,896. The number of petty officers in service on the date noted above was 4,788, of whom 2,819 were natives of the United States, while the number of men was 14,037, of whom 7,724 were natives.

Sixty-one per cent. of petty officers are native born, and 93 per cent. are citizens; 72 per cent. of the men are native born, and 83 per cent. are citizens; 94 per cent. of the apprentices are native born and 6 per cent. are foreign born; 73 per cent. of the whole enlisted force are native born, and 83 per cent. are citizens.

About 94 per cent. of the whole number of landsmen for training are native born.

The Bureau approves of the system of messing men recommended by the board appointed to consider this subject who propose: First. "That Congress be asked to authorize the payment of ration money for enlisted men by public bill, monthly, to commissary officers and mess treasurers. This money should not be credited or paid to members of the various messes, as it belongs to the messes and not to individual members thereof; to revise the ration table as recommended; to authorize additional compensation at the rate of \$5 per month to marine messmen." Second. "That the President be requested to prescribe proposed rates of pay to chief commissary stewards, commissary stewards, bakers and cooks, and to authorize additional compensation at the rate of \$5 per month for enlisted men of the Navy detailed for duty as crew messmen." Third. "That the department establish the ratings of chief commissary steward; commissary steward; baker, first class; baker, second class; and amend the regulations of 1900 in conformity with the changes recommended."

The board also propose the adoption of an improved naval ration.

An amendment to Sec. 1422, Rev. Stat., on the subject of the discharge of enlisted men is recommended by the Bureau so as to provide for the transportation of enlisted men and apprentices to homes or to the place of enlistment according as their discharges have occurred by reason of medical survey or expiration of enlistment. Also an amendment to Sec. 129 to bring it into conformity with the present practice as to honorable discharges.

Attention is called to the necessity for providing suitable ships and training stations for enlisted men in view of the fact that we have no adequate merchant marine in which men can practice seamanship and even had we the training on board of a merchantman does not meet the requirements of man-of-war service, which requires three or four years of special training. The system adopted two years ago of enlisting young landsmen and training them for seamen is giving good results, notwithstanding the fact that the Bureau has not had as suitable ships as should be provided, and the demands of the service have not permitted keeping the men under training as long a time as was desirable.

With suitable barracks larger numbers can be properly housed, the young recruits can be kept under training for six or eight months, and their health cared for infinitely better than if housed in old insanitary hulks. Unsatisfactory material can at the same time be weeded out.

An increase of 3,000 in the personnel is asked for, making a total of 25,500 men, and 2,500 apprentices under training. More officers are also needed if it is intended to man the ships now out of commission which will require not less than 1,026 in all on the extremely conservative basis of one-half the force provided to meet actual conditions in other navies. Officers in the line are now increasing only at the rate of ten a year, and the number of cadets at the Academy should be increased, there being accommodations there for each member of Congress, with ten at large, giving to the Navy a total of 350 lieutenants and 600 lieutenants, J. G., and ensigns.

Attention is called to the disability under which we suffer abroad owing to our want of navy officers of sufficient rank to hold their own among foreign officers when prestige is

determined by rank. It is recommended that we have four vice admirals and fourteen rear admirals.

Concerning a Naval Reserve, the report says: "The grave error of failing to provide a sufficient personnel, which has crept into our naval policy, can in some measure be met by the establishment of a suitable Naval Reserve, and the Bureau recommends that the Department ask Congress at the earliest opportunity to provide for a national Naval Reserve by passing a bill similar in purport to that recently recommended by the general board."

A MAN WHO RIDES THE STORM.

An authorized article on the Brazilian aeronaut M. Santos-Dumont appears in the November century from the pen of Sterling Heilig:

This young Brazilian inventor works for the love of the thing, not for lucre. He has never felt moved to apply for a single patent. He is a son of the "Coffee King" of Brazil, the proprietor of the Santos-Dumont plantations of Sao Paulo, the friend of the former Emperor Dom Pedro, and the benefactor and advisor of whole populations. Santos-Dumont, the father, although a Brazilian by birth and nationality, was French by descent, and had his technical education at the Ecole Centrale (Arts and Industries) in Paris. Thanks to this education, he was the first to apply scientific methods to Brazilian coffee-culture, so that his plantations became the most flourishing in the land, having four million coffee-plants, occupying nine thousand laborers, comprising towns, manufactories, docks, and steamships, and served by one hundred and forty-six miles of private railroads. It was on these railroads that the young Santos-Dumont, before he was twelve years of age, drove locomotive-engines for his pleasure, and developed the taste for mechanics and invention which saved him, coming young and rich to Paris, from a life of mere sporting leisure. Until eighteen years of age, when he completed his education at the University of Rio de Janeiro, he remained in Brazil, always returning in vacation-time to the wild back-country of the plantation, where he became a mighty hunter, killing wild pigs and small tigers by preference, and great snakes out of a sense of duty.

Arriving in Europe in 1891, he made a tourist trip and ascended Mont Blanc. A part of 1891 and 1892 he spent between London and Brighton, perfecting his English, which he now speaks as well and as often as French; but he always returned to Paris, where in 1892 he was already driving automobiles. In 1894 he made a short trip to the United States, visiting New York, Chicago, and Boston. He did not begin ballooning until 1897, in the summer of which year he made his first ascent in company with the late M. Machuron. In the same year he made twenty other ascensions, a number of them unaccompanied, and became a reliable pilot of spherical balloons. He has, indeed, an ideal figure for the sport, uniting remarkable strength, agility, and coolness to his jockey's weight of scarcely one hundred pounds. For this reason he was able to lower the volume of the "Brazil," his first spherical balloon, to the unusual minimum of 113 cubic meters. The little "Brazil" was always filled with hydrogen, and after each ascension he never failed to bring it back with him in his valise.

STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade, October 19, 1901.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo.....	1,983,000	1,121,000	461,000	25,000	358,00
Chicago.....	5,310,000	6,891,000	1,8,0,000	415,000	21,000
Detroit.....	596,000	289,000	47,000	150,000	42,000
Duluth.....	4,695,000	484,000	453,000	332,000	487,000
Fort William, Ont.....	1,421,000	..	..	..	..
Milwaukee.....	124,000	85,000	433,000	36,000	206,000
Port Arthur, Ont.....	175,000	..	..	..	..
Toledo.....	536,000	546,000	1,081,000	364,000	9,000
Toronto.....	26,000	..	..	..	55,000
On Canals.....	457,000	378,000	385,000	..	264,000
On Lakes.....	1,198,000	769,000	27,000	117,000	414,000
On Miss. River.....	..	..	..	..	..
Grand Total.....	39,393,000	13,449,000	8,044,000	1,864,000	2,586,000
Corresponding Date, 1900.....	58,313,0,0	8,914,000	12,310,000	1,017,000	2,595,000
Increase for week Decrease ".....	1,185,000	35,000	275,000	76,000	550,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

Wireless telegraphy's record distance over water has been attained by the Arrogant, which signalled land when 162 miles out at sea.

NEXT DOOR NEIGHBORS.

(CONCLUDED FROM LAST WEEK'S ISSUE.)

The navy court whose highest officer was a lieutenant-commander, and which adjudged that a navy captain should not be embarrassed by awkward questions as to the meaning of his testimony, gave an equally worthy judgment that no less than five different punishments should be the penalty for the charge. In the G. C. M. O. on the case, the Secretary of the Navy says: "The charge, 'conduct to the prejudice of good order and discipline,' having been fully sustained, it is proper to add that Ensign E., in the conduct referred to, was guilty of insubordination, disrespect to his superior officers and a willful disregard of the regulations." But E. was neither charged with, nor found guilty of "disrespect" nor "violating a lawful regulation of the Secretary of the Navy." (Art. 8, sec. 1624 R. S.) No such dubious accusation as "insubordination" is made punishable by naval statute. This sentence is testimony to the veneration in which a captain's reputation for veracity is held on the high seas. It is the altar of the church of discipline. The sacrifice of attacking it was committed here.

The following are extracts from the record of the cross-examination of K. on his denial that he had not, as reported, "inflicted an illegal punishment in compelling E. to come to a public place, the starboard side of the quarter-deck, and there in the presence of officers and men, reprimanding him."

Cross-examined by the accused:

Q. "In your letter to Admiral M. you told Mr. E. on the quarter-deck that his action was 'unofficerlike and disrespectful'; did you not?"

A. "I put him under suspension for 'unofficerlike conduct and disrespect to his superior officer,' and that was in substance the report I made to the Commander-in-Chief."

The accused made the following request: "Please ask the witness to answer the question and nothing else."

The witness replied: "I can tell by referring to my letter, which I have with me." The court permits the witness to refer to the letter.

A. "I told him that I looked upon his action as unofficerlike and disrespectful to his superior officer and that he should consider himself suspended from duty accordingly. That is what I wrote."

Q. "What else did you say on the quarter-deck?"

A. "I told Mr. G. to enter the fact of the suspension in the ship's log."

Q. "What else?"

A. "Don't remember anything else."

Q. "What did Mr. E. say to you?"

A. "I don't remember."

Q. "Where was Mr. P. (the officer of the deck)?"

A. "He was on the port side of the quarter-deck."

Q. "What hour of the morning was it?"

A. ". . . between half past seven and eight."

Q. "And about that hour the crew are busy cleaning 'deck's bright work'?"

A. "Very few were about the quarter-deck. I saw very few, I took no notice of them—paid no attention."

Q. "Is the quarter-deck a 'public place' as stated in the specification?"

A. "It is not as 'public' as other parts of the ship. . . . The starboard side is less 'public' than the port side."

The accused requested that the witness answer the question directly. The witness insists on his answer as just given.

Other shuffling testimony of this kind, guarded with "this is as nearly as I can remember" and similar phrases which might reasonably be expected to protect faltering denials, if contradicted by observant witnesses sufficiently daring to repute their commanding officer, prompted E. to put on the stand, among the witnesses for the defence, a watch-officer of the *Adams*. This is the record of his testimony:

Q. "What is Commander K.'s general reputation for veracity?"

A. "I don't know anything about his reputation outside of the *Adams*."

Q. "What is his reputation for veracity, as far as you know?"

A. "I should say it was not good."

Q. "Would you believe Commander K. on oath?"

A. "I would hesitate about it."

Lieutenant M. was a graduate of the Harvard Law School. His legal learning, his native ability, warned him that the consequences of such brave conscientiousness could not be pleasant. After the trial he was detached from cruising and ordered to a stationary vessel in the cheerless harbor of Sitka, Alaska, for three years.

"To substantiate the character of Captain K.," as the record quaintly put it, the President of the court-martial himself was called. (This did not demonstrate that the court was "packed", at least not necessarily, but that bias in favor of K. was not deceitfully concealed.) After "substantiating K.'s character," he was asked on cross-examination:

Q. "Will you please state what his reputation for veracity is on board the *Adams*?"

A. "I know nothing about his reputation aboard the *Adams*."

(This witness was the executive of the flagship *Hartford*.)

The next witness also failed to come from the *Adams*, (he was a watch-officer on the *Hartford*) also "substantiated" the "character," and was also thus questioned:

Cross examined by the accused: Q. "What has been his, K.'s, general reputation for veracity for the last six months, and on board the vessel on which he is stationed?"

A. "I do not know."

No other questions were asked these witnesses.

A third witness, who also failed to represent the views, at close quarters, in K.'s vicinage, the pay-inspector of the *Hartford*, "was called for the purpose of substantiating the character;" and also, on cross-examination, replied to a question as to what had been K.'s reputation for veracity during the past six months and on board the vessel on which he is stationed" that he had "no knowledge on the subject."

It is significant that at this point "the court took a recess for ten minutes." This recess was not at the request of the judge-advocate. Immediately after recess the first witness introduced was from the *Adams*, (at last) its amiable old paymaster, also a "substantiator." He testified, "As far as I know his reputation has been good for veracity." But on cross-examination he was asked, "Have you ever seen him placed in a position where he would be tempted to tell an untruth and where he has not done so?" To which he answered in the negative.

The next witness, the also aged chief engineer of the *Adams*, was cross-examined thus:

Q. "Have you during that time, ever known him to be placed in a position where he would be tempted to be untruthful, and where he has not been so?"

A. "No."

With a single other remarkable exception these were all the witnesses called from the *Adams* to testify that the captain of this vessel had either a good reputation or could be believed on oath among and by the men whom he commanded. In showing that they were friends of K., and in positions to receive cabin favors, in their scrupulously declining to affirm that they had seen him a man of honor when it was profitable for him to be the reverse, they gave testimony far more valuable than the surface evidence intended by them, viz., of the high character of naval officers in general, unwilling to deflect from truth that doesn't pay to some falsehood that does. The same is to be said of the other witnesses, not one of them saying "yes" to the repeated question "have you ever seen him placed in positions where he could be tempted to be untruthful and where he has not been so?" The care maintained made some ludicrous contrasts. Thus a Capt. Wilson, having given favorable testimony to K.'s "veracity" for "about 21 years," damped it with "so far as I know" and confessed (this in 1886) that he "had not been with him for any length of time since 1872." And on being asked, "Have you ever noticed Capt. K. in positions where he could have been tempted to be untruthful and when he has not been so?" answered, "Don't know anything about that."

Reserved as the last witness was a second member of the court, who, having listened to all the other witnesses, knew what to say. Yet his luke-warm description of K.'s "reputation" was only, "Good as far as I know."

No less than ten witnesses were called. Only three of them came from the *Adams*. Yet it was his reputation as a man, as proven in his neighborhood, where he lived, that was at stake. Not a watch-officer of the *Adams* was found to uphold him. Not one of the steerage officers, young men who needed his favors, leaves of absence, etc. The surgeon, the professional member of the ward-room, would not swear to his master's credibility; nor the commandant of marines. The pregnant silence of all these against the pressure of their superiors, against their own interests for the three years to come, was silent testimony that naval officers are not to be bought.

Was there one exception that proved the rule? The third *Adams*' witness, Lieut. G., when asked "What is his reputation for veracity?" did not answer with a straightforward "good," but significantly denied that he had "heard" K.'s "veracity called in question" and however, this may have been, G. added, he "certainly" had "no reason to question it himself." G. alone corroborated K. as to the non-infliction of a reprimand. To do this he cautiously avoided quoting K., saying that K.'s language was "to this effect." When questioned whether K. reprimanded the accused, the answer was not "no" but, with a long circumvention,

"I did not consider" that what was said was of the extreme "nature of a reprimand." It was both unnecessary and useless to cross-examine such a witness. In the summer of 1886 a second court-martial overtook Lieut. Comdr. N. Then E. was no longer there to help him, and N. was sent home to be dismissed. By the dismissal Lieut. G. was promoted from his dark cellar-like berth below, into the upper deck, airy and commodious quarters of N., where he remained with K.'s glad approval until the cruise ended in 1889. But all this may have been chance and G.'s way of thinking and talking.

A final tribute is due to the enlisted men of the Navy. Their widely prevalent nobility of character was reflected in humble Ship's Bugler Thos. Murphy, and in Landsman W. D. Callan, both of the *Adams*, who testified to their captain's angry "gestures with his right hand," his loudly accusing E. "of doing something over K.'s head;" his "shaking his head," charging E. with "unofficer-like conduct," of hearing "the men talking forward about it" and "around the deck." No one who realizes how much moral courage such testimony demanded, from lowly men whose fortune and happiness are absolutely at the mercy of the Sultan whom they serve, can deny that there is as worthy timber for commissioned officers among seamen, among men of the merchant marine, as was in the cabin boy who became Marshal Massena of Napoleon's France.

GEO. F. ORMSBY.

Washington, D. C.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.

Insurance—Policy Not Attaching.—The policy of the consignees having been expressly limited by its terms to "wool, their own, or consigned to them, not previously insured," did not attach, the wool being already insured, not only by the contract of the steamship company, under the bill of lading rate, to carry insurance, but also by its policies which at once became pro tanto applicable thereto, although the risk had not yet actually attached; it further appearing that it was the intention of the parties that the policy should take effect only in case there had been no insurance by the consignor. Gross vs. New York & T. S. S. Co., 107 Fed. Rep. (U. S.) 516.

Marine Insurance—Open Policy.—A shipper of wool by rail and water contracted with the steamship company to cover the shipment by marine insurance for an additional rate of freight stated in the bill of lading, which was in accordance with the company's custom. It carried several policies issued about six months before, covering such cargo as it was required by contract to insure, and also its own risk as a carrier. Such policies were all applicable to the cargo in which the wool was shipped. The consignees of the wool, having paid draft against the shipment attached to the bill of lading, and not knowing whether the goods were insured, reported them for insurance under an open policy carried by them for several years, under which they had covered "wool * * * not previously insured." This was before the goods had actually been received upon the ship, but while they were in course of shipment by rail. All the policies contained the American clause against double insurance, providing that "if the said assured shall have made any other assurance * * * prior in day of date to this policy, then the said assurers shall be answerable only for so much as the amount of such prior assurance shall be deficient," etc. Held, that such clause had no application as between the two sets of policies to affect the validity of either, not being applicable by its terms to insurance under an open policy and neither the assured, the interests insured, nor the risks insured against being the same in the two cases. Gross vs. New York & T. S. S. Co., 107 Fed. Rep. (U. S.) 516.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—NEW YORK.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., Oct. 17, 1901.

GENESEE RANGE FRONT LIGHT—Notice is hereby given that, on or about October 31, 1901, the arc of illumination of this fixed red light, located on the west pier, entrance to Charlotte Harbor, mouth of the Genesee river, southerly shore of Lake Ontario, will be increased from 180° to 270°.

The light will then be visible from all points of approach upon the lake.

By order of the Light-House Board:

N. H. FARQUHAR,
Rear-Admiral, U. S. Navy, Chairman.

Capt A. Gallagher, of the steamer Indiana, reports to the Hydrographic Department a least depth of water of 14 feet on a shoal about 600 feet due west of the harbor entrance at Grand Haven.



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CLEVELAND, O., OCTOBER 24, 1901.

CLEVELAND'S LAKE COMMERCE.

It is quite assured that the successor to Col. Smith, the engineer formerly in charge of the conservancy and improvements of rivers and harbors within the Cleveland district, is fully alive to the necessity of Federal help in bringing about the best interests of general commerce.

On this subject, Major Kingman, Corps of Engineers, U. S. A., the present officer in charge, said in a recent interview: "The freight tonnage of Cleveland harbor is very large. It amounted to more than 7,500,000 tons in 1900, an increase over the previous year of 178,000 tons. Large as is the commerce, this increase is considerably less than that in many of the other harbors in the district, and this would seem to indicate that the present business is now very nearly equal to the maximum capacity of the harbor. The harbor room within the river mouth is very much cramped, and the approaches to it by land are difficult and through the heart of the city. An extension of the breakwater outward, whereby sufficient docks might be constructed along the lake shore, seems to be the only relief from this condition."

It will be observed that the engineer does not specify to what point eastward the breakwater should extend. Congressman Burton's idea is to have it built as far as Gordon Park, while Senator Hanna thinks Case avenue is far enough under present conditions.

Major Kingman next proposes to take the work of dredging in all the harbors of this district from private contractors, and have it done by the government. This reform, in his judgment would be advisable from an economical point of view, and, moreover, would insure more satisfactory results in other ways. Discussing this point, he said: "The real thing of value to navigation in this district consists of certain areas and channels artificially deepened by dredging, all the other works being now designed for their protection and preservation. No work that can be devised, however, will prevent the beach sand from being lifted and scattered by the waves in time of storms, and no works will prevent the rivers from bringing down their annual burden of silt.

"The utmost that can be hoped for in the way of permanence is to secure the construction of jetties and breakwaters of imperishable materials, and of sufficient strength to resist indefinitely the forces to which they are exposed. After this it will be only necessary to maintain the depths which we desire by redredging. This will, no doubt, be a continuous expense, but it need not be a heavy one, if the district is properly equipped with machinery to execute the work."

"To be compelled to resort to contracts to secure this dredging is, in my opinion, slow, cumbersome and expensive. I think the district should be provided with a hydraulic dredge of modern construction and design, capable of discharging the excavated material at a distance through a

long pipe, or of receiving it in its own hoppers and transferring it with its own power to the dumping ground. Such a dredge should be of the sea-going type. I am of the opinion it could be built for \$250,000, and the cost of its repair and maintenance would be \$60,000 per annum. I believe such a maintenance can do all the dredging of the kind which will be required hereafter at a cost of less than half the price now paid for contract work."

The amount which Major Kingman suggests should be appropriated for expenditure for the purpose of improving the approaches to Cleveland during the fiscal year ending June 30, 1903, is \$100,000; for further dredging he recommends \$175,000. The total appropriations for Cleveland harbor improvements up to date amount to \$2,747,631.61.

Concerning the government aids to commerce and navigation at other ports in the district, Major Kingman says: "At Fairport great trouble is experienced in maintaining the required depth in the harbor. The shore line to the westward of the jetties is advancing rapidly and is now about 1,700 feet out from where it was when the improvement was commenced. It may be necessary before long to consider the expediency of constructing one or more groins to the westward of the harbor in order to arrest the movement of sand.

"The cost of maintenance of harbor at Fairport must very soon include extensive repairs and rebuilding of a large portion of the old jetties. On the east side 595 feet, and on the west side 625 feet should be rebuilt as soon as practicable. The cost of this, estimated at \$120 a foot, would be \$146,400. The cost of sheathing and repairing 1,137 feet more would be \$28,425, and the expense of maintaining the channels, \$10,000, making a total of \$184,825, which could be expended advantageously within a year. In addition to this \$200,000 could be expended in the same period on the breakwater project, to complete which will cost \$480,000.

"The shore to the westward of Ashtabula Harbor is composed of sand, and the shore line is constantly advancing by accretions washed in by the waves, which obstruct the channel. I think it desirable that the United States should acquire title by condemnation or purchase to at least half a mile of the lake shore to the westward of the jetties, in order that this movement of sand might be arrested or controlled by a plantation of willows or by suitable sand fences. The jetties are in a ruinous condition and in great need of immediate repair. The cost of repairing and rebuilding them would be \$205,000. This amount is urgently requested. The sum of \$300,000 could be expended advantageously next year on the existing breakwater project."

Other estimates for expenditure during the year ending June 30, 1903, are: At Conneaut, \$210,000; at Monroe harbor Mich., \$10,000; at Toledo, \$280,000; at Port Clinton, \$7,000; at Sandusky, \$160,000; at Lorain, \$310,000; at Huron, \$50,000. To complete the breakwater at Conneaut will cost \$407,000 and at Lorain \$530,350. If the harbor at Vermilion is not to be abandoned the engineer says that provision should be made to restore it to its former condition before it is too late.

ST. LAWRENCE NAVIGATION.

Christopher Furness, a prominent English ship owner and builder, has been touring Canada, looking into the possibilities of finding feeders for his ships. If these are forthcoming, the fast trans-Atlantic service will be established. He is backed by Lord Strathcona and the Canadian parliament, and if his service goes through, the needed improvements to the St. Lawrence waterway will be made.

It seems rather a remote contingency to depend for lower insurance rates upon a possible improvement of the St. Lawrence to aid a possible fast ship service, the establishment of which depends upon a probable discovery of sufficient feeders for such boats, yet the matter is not so remote as it appears. In fact, some industrial leaders claim to have assurance from Sir Christopher that the ship line is to be established. Lord Strathcona was asked concerning the line in Montreal.

"That," replied Lord Strathcona, "is a matter between Sir Christopher and the government. It is true we talked the matter over during his stay here, and we both do, as I am sure the government does, realize that the St. Lawrence route should be made as safe as human foresight can make it. If it is true, as Sir Christopher says, that the insurance rate for Canada is from seven and one-half to eight guineas, as against three to New York, Boston, and other American ports, we are heavily handicapped, and the government should, and I am convinced will, do all in its power to im-

prove the route, if this is possible. If such drawbacks exist, as it is claimed, there is no sentiment in this question of insurance; it is purely a business matter. Competition is too keen nowadays for any sentiment to intervene, and if it were safe to take lower rates, you may be sure there would be plenty of offers."

The best men afloat are engaged in the North American trade, and, with adequate aids to navigation the St. Lawrence route could no doubt be made a successful channel of commerce. The Dominion government alone is responsible for results.

THE ENERGY IN THE WORLD'S COAL OUTPUT.

The total quantity of coal taken in any given year from the mines of the whole world cannot be very accurately ascertained, but from the best available information it may be assumed to have been about 700,000,000 tons of 2,000 pounds each for the year 1900, the last of the nineteenth century. Assuming that the combustion of one pound of coal produces available energy equal to the work of one horse for one hour, and that a horse-power is equal to the power of seven men, it is found that this represents in energy the equivalent of 9,800,000,000,000 hours of work for one man, and allowing ten hours to each day and 300 working days to the year, this is found to be equal to the work of 3,000 millions of men during one year. This is about double the entire population of the globe, and it follows that the utilization of the energy of combustion is equivalent to an increase of the working capacity of this population to the extent of an addition of two able bodied men for every man, woman, and child; and practically it amounts to much more than this, for these additional 3,000 million stalwart laborers make no demands upon the food products of the world; they need no clothing, no matter what the zone of their employment, and in faithfulness, loyalty, general docility and ease of management they are beyond compare.—From Casier's Magazine for November.

NIAGARA RIVER PILOTING.

It seems as if more attention might, in all justice, be given to the commerce of Niagara river and to the Tonawandas.

The owner of a vessel, which met with a grounding casualty recently, made the following statement: "Marine men have had little or no trouble in getting a river or harbor appropriation measure before the House of Representatives in former years, and for a time their efforts met with apparent success, but in the end they were doomed to defeat, as Representatives from the west and south, who knew not the commercial importance of the Niagara river, opposed the measure most strenuously. It is hardly safe for a vessel of the larger type to navigate the Niagara river, and it is now time that steps toward bettering the condition of the river be taken."

It has been estimated that for the last ten years marine men, insurance companies and shippers have suffered an aggregate loss of about \$1,000,000, owing to the lack of a few hundred thousand dollars expended for dredging and otherwise improving the stream.

LOW OCEAN FREIGHT.

Deputy Consul-General Hanauer reports from Frankfort: In consequence of the low rates for ocean freight (4s., or 96 cents per ton on grain from United States ports to Europe) Hamburg steamship lines will import American coal. According to Hamburg papers, a shipment of American coke is now bound for that port. A Russian journal calls attention to the fact that a steamship, laden with American coal, has arrived at Cronstadt, which is all the more noteworthy as coal imports from England and Germany have declined considerably of late.

ANOTHER SHOAL.

It has been reported to the United States engineer's office, in Buffalo, that a steam barge drawing 15 feet 2 inches recently struck in the St. Lawrence river about midway between McNair's Island and the Canadian shore, just below Brockville, directly in the channel where the charts show from 50 to 60 feet depth. Immediate steps will be taken by Major Symons, the engineer in charge, to locate and chart this hitherto unknown shoal and, in the meantime, deeply loaded vessels should exercise care in navigating the waters in the vicinity of the reported obstruction.

CAPE RACE DISASTERS THIS SEASON.

Recently there was a paragraph in the New York papers containing the statement that a captain of a vessel just arrived from sea reported that in passing Cape Race he had witnessed the remarkable spectacle of no less than five ocean steamers lying stranded and wrecked within sight of each other. A Canadian contemporary in treating this subject says that as a matter of fact, eight ocean steamers have been wrecked in the neighborhood of Cape Race during the past eight months, representing a loss of at least two million dollars, and it is doubtful whether in any other part of the world such a record of marine disaster can be shown. The locality is even more dangerous to shipping than that naval cemetery, Sable Island, and according to the official returns just compiled and published in Newfoundland, there have been eighty-two ships wrecked, of which sixty-seven were steamships, during the past thirty years on a stretch of coast around Cape Race, not forty miles long, and, in several instances within a stone's throw of each other.

The result of the last eight months' disasters has been to strengthen the prejudice against the St. Lawrence route which has existed previously, and now two of the leading insurance companies are cancelling policies and declining to issue any new ones over the route. "Under such dangers and commercial conditions," says the Ottawa Evening Journal, commenting on the subject, "the St. Lawrence traffic must decrease, no matter what pains are taken to improve harbors, and deepen the St. Lawrence river." This is undoubtedly too true, and the first step to obviate the threatened contingency is to show that the prejudice against the St. Lawrence route, so far as it is founded on the Cape Race disasters at any rate, is as unfounded as it is unjust.

In discussing some time ago the merits and demerits of the St. Lawrence route, properly so called, that is to say, of the gulf and river itself, we expressed the opinion that the main cause of the disasters that occurred along it was the recklessness of those using the route. A very little examination of the details we have given above will serve to show that the same thing may be predicted of the Cape Race marine tragedies. Over eighty-one per cent. of the total during thirty years befell steamers; the number of sailing vessels was barely one every other year, and though it may be urged these latter have been to a great measure superseded by the former class, yet this is only of late years, and the force of the plea is nullified by the long period for which account is taken. The obvious deduction is that the superior speed of the steamships has been the means of obtaining them this bad pre-eminence, and the reckless use of it in a region of fog and strong currents has brought about the majority of the wrecks. To attribute them to any unavoidable defects in the St. Lawrence route is therefore unreasonable.

It is also unjust. Cape Race has nothing whatever to do with the St. Lawrence route in the sense it is assigned to it. This become apparent when we look closely into the list of the eight casualties this year, which is as follows:

Jan. 2nd, steamer Iyydene, Hamburg to Wilmington, salt cargo.

Feb. 4, steamer Lucerne, Ardrossan to St. John's, coal.

May 25, steamer Crewe, Sydney to Belle Island, ballast.

June 6, steamer Assyrian, Antwerp to Montreal, general cargo.

June 25, steamer Lusitania, Liverpool to Quebec, 450 passengers and general cargo.

July 6, steamer Delmar, Dundee to Mobile, ballast.

Aug. 2, steamer Vera, London to Montreal, ballast.

Aug. 3, steamer Aois, Galveston to Hamburg, cotton and grain.

Here then we have one steamer running from Hamburg to Wilmington, and another from Scotland to a New Brunswick port, a third from Dundee to Mobile, and a fourth from Galveston to Hamburg; half of the total amount had no more to do with the St. Lawrence route than they had to do with the man in the moon, three-quarters of them, in fact sailing from European ports to ports in southern United States. These should be reckoned to the debit side of the account of the general ocean route, and when this is done, the very worst that can be urged against the St. Lawrence route is that it is not less dangerous than the other one.

The two new American line steamships, Finland and Kroonland, at Cramps' shipyard, will be ready for launching in a few weeks. Each vessel is 580 feet long, 70 feet beam, 30 feet depth of hold, with a gross register of 12,000 tons. They are intended for the New York, Southampton and Antwerp service.

FOREIGN COAL FREIGHTS.

We take the following from the Black Diamond, New York, as reported by Messrs. W. W. Battie & Co., ship and steamship brokers, Produce Exchange, New York.

During the past week there has been little change in the freight rates on coal to foreign ports, a number of steamers having been chartered to Mexican, Cuban and Mediterranean ports at same rates as previously quoted. A number of steamers also have been chartered to take coke to Mexico at \$2.50 per ton, and the steamer Peter Jabeson, 2,274 tons register, was chartered to take coke from Philadelphia to Tampico at \$2.40, but this charter does not give an idea of the market, as the vessel accepted 10 cents a ton less than a number of coke parties were offering on similar business. During the week a number of sailing vessels have been chartered to take coal to Cuban ports at last rates quoted. Also to go to ports in Martinique and Guadaloupe at \$2.25, and to ports in Porto Rico at \$2.00, charterers paying foreign port charges. The owners of large sailing vessels now wish to send them south for the winter, and consequently there are a number of large vessels offering for this class of business, and these rates are bound to decline.

We would quote freight rates by steamer as follows: \$1.40 to \$1.45 to Havana or Matanzas, \$1.50 to \$1.55 to Cienfuegos, \$2.00 to Cardenas or Sagua, \$1.75 to St. Lucia or St. Thomas, \$1.60 to \$1.70 to Kingston, \$1.70 to \$1.75 to Port Spain, Trinidad; \$1.85 to Bermuda, \$2.25 to Demerara, \$1.50 to \$1.60 to Tampico or Vera Cruz, 14s to 14s 3d to Rio, 9s 3d to 9s 6d to a direct port in the Mediterranean, not east of the west coast of Italy, Spain excluded; 8s 6d to 9s to Bordeaux, St. Nazaire or Havre, \$5.75 to \$6.00 to Manila, Yokohama or Nagasaki.

ANOTHER INDIANA HARBOR.

Contracts have been let for the building of a new harbor eight miles east of the piers at South Chicago, to be known as "Indiana harbor." The location of the new harbor is directly lakeward from the town of East Chicago. The channel will be 300 feet wide and 20 feet deep and the first contracts call for its construction 1,200 feet inland, the ultimate intention being, however, to continue the channel to East Chicago. A large number of people are interested in the enterprise, but the contracts will be made in the name of the Lake Michigan Land Co. They call for the construction of a twenty foot channel and its completion ready for business by Nov. 1, 1902. The aggregate cost will be \$200,000. It is the aim of the projectors to build up another manufacturing center around the site of the new harbor. Good connections can be easily secured to the belt lines of street and steam railroads.

ROLLING LIFT BRIDGE.

The Cleveland, Cincinnati, Chicago & St. Louis Railway Co. several days ago placed into service their new double-track Scherzer rolling lift bridge across the Cuyahoga river at Cleveland, Ohio. This bridge was designed by The Scherzer Rolling Lift Bridge Co., Chicago, and replaced a double-track swing bridge which was obstructive to navigation, and also very frequently placed the very heavy passenger traffic crossing it at a serious disadvantage. The bridge is used by the main lines of the C. C. C. & St. L., L. S. & M. S., Erie and other railroads and is the principal railroad bridge crossing the Cuyahoga river at Cleveland.

The first Scherzer rolling lift bridge constructed several years ago for the C. C. C. & St. L. Ry. across the Cuyahoga river at Cleveland proved so satisfactory in every respect that the progressive management of the railroad company determined to remove the obstructive swing bridge at this much more important crossing and substitute a Scherzer rolling lift bridge.

Railroad traffic was constantly maintained upon the swing bridge during the construction and erection of the Scherzer rolling lift bridge. Vessel traffic in the river was also maintained, as the new bridge was erected in the upright position, on the piers which support the bridge when completed, the trains being operated through the new bridge during erection. Upon the completion of the new bridge, the center of the old bridge was removed; the new bridge was immediately closed into service, and within fifteen minutes, five passenger trains crossed the river on the new Scherzer rolling lift bridge. The new bridge has since been in successful operation, and the railroad service has been greatly improved.

The entire work of preparing the designs and plans and

the construction of the bridge, together with the removal of the old swing bridge, was under the immediate charge and supervision of Mr. George W. Kittredge, chief engineer of the C. C. C. & St. L. Ry. The Scherzer Rolling Lift Bridge Co. furnished the plans and specifications and checked the shop plans for the superstructure of the new bridge and also furnished a consulting supervision over the erection of the bridge until completion. The plans for the substructure were prepared by the railroad company.

CAPITAL VERSUS LABOR.

I have received the following circular letter from the business agent of the Marine Engineers' Beneficial Association, Cleveland, O.:

In reviewing the history of the trusts during the past few months, and their treatment of their employees who dare to assert themselves or ask for any privileges, we believe that it behoves us to combine as a Labor Trust, in order to be able to compete with the Money Trust. Then, and then only, they will treat us in a business way and recognize our demands as a business proposition. It is our only hope and the only recourse left.

It is proposed to combine the five railroad organizations on the railroads that run from the mines to the upper lake ports and also from the lower lake ports, to the marine and dock organizations, whose principal business is the transportation of freight towed and controlled by the trusts, and thus form a Labor Trust, on the same lines as the Money Trust, and also adopting the same plan as the railroad associations, which are so successful at the present time.

We believe that it is the intention of the trusts to absorb all the railroad manufacturing industries in which there is a profit or is in competition with them. The position they assumed in the late steel strike shows what individual labor organizations may expect when they come in contact with the trusts.

As the organizations at the present time are not united and each is fighting its own battles to the best of its ability, and at different times, it is plain to prophesy the inevitable result.

Should the trusts decide to attack the workers on any particular railroad line they would ship their freight over some other line controlled by the trusts until the men were forced to submit.

Now, if all the men were combined from mines to mills and from mills to distributing points it would be easy to adjust matters, for then it would be made a business proposition on equal ground—trust against trust.

If the marine men were forced to go out all the railroad and dock men at the upper lake ports would be compelled to lay idle, while the mills would be supplied from stock piles at the lower lake ports.

It is not the intent or purpose to form a new labor organization or to create a salaried position for any ambitious labor leader, but to combine all organizations now in existence for mutual protection.

We, therefore, deem it imperative that all organizations engaged in the transportation business should be combined for mutual protection so that we will not be compelled to accept that which the trust dictates, unless we so desire.

We hope you will take this question up in your lodges and act favorably on it, and be prepared to send your delegates to Cleveland in the near future to organize a Federal Board to handle this combination. You will be notified when and where to meet after the season closes.

It may be impossible for us to get the addresses of all the organizations interested, so it is hoped you will talk it up at every opportunity, as we are doing. Please study this circular carefully and you will recognize the benefits to be derived from such a combination for all interested.

It is reported that the estate of the late Hugh Ramsay will operate the shipyard located at Perth Amboy, N. J., which has been closed for some years. The plant is well located and almost completely equipped for building all classes of steel vessels. The new shipyard is to be known as the Standard Shipbuilding Co., and has been incorporated with \$125,000 capital stock, by Sarah J. L. Ramsay, Amy E. Crowell, William E. Ramsay, Allen L. Ramsay, Hugh V. Ramsay, and Isabella L. Ramsay. The yard will be managed by the sons of the late Hugh Ramsay, who have grown up in the shipbuilding business, and should make a practical success of the new yard.—The Nautical Gazette.

Henry Peters, of New Orleans, is having built the largest floating derrick ever constructed in the South. It is to be used for wrecking purposes and for loading vessels with heavy timber, and measures 110 feet long over all, 50 feet beam and 9 feet depth of hold. The hull is built of yellow pine, fastened with galvanized spikes. The entire upper works, the derrick, crane, etc., will be of steel. The steel boom and shears will be purchased from the American Bridge Co., New York; the boilers, engines, winches, etc., all of which will be adequately powerful, from the Lidgerwood Mfg. Co., New York, and the blocks and hoisting gear from the American Hoist and Derrick Co., of St. Paul.



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NAVAL STEAM ENGINEERING.

In his annual report Rear Admiral Melville, Chief of the Bureau of Steam Engineering, urges the imperative necessity for strengthening the Navy along engineering lines. It is the requirements of the future rather than the demands of the present which should be provided for. He says it will not be long before the younger officers who have been trained in professional engineering work lose interest, aptitude, confidence, and even efficiency in engineering duties, if they are allowed to specialize in other directions. He says: "From this and other causes engineering efficiency in the navy is rapidly decreasing. With such a state of affairs a trained engineering force for the future needs can hardly be regarded as satisfactory. It should not, therefore, excite surprise when I unqualifiedly assert that there has been retrogression rather than advance along engineering lines during the past two years." He says individual officers have striven earnestly to perfect themselves in the duties of the engine room, but calls attention to the fact that there has been no systematic plan enforced for universal training. "As a result of this inadequate supervision in the engine rooms there has been a perceptible decrease in the efficiency of the machinery and a progressive increase in the cost of repairs."

The following recommendations are made:

1. That the policy lately inaugurated of detailing junior officers of the line exclusively to engineering duties be greatly extended.
2. That a post-graduate course of instruction in marine engineering and design be established at the Naval Academy for junior officers of the line.
3. That at least two war vessels be used in part for the general training of firemen.
4. That several torpedo boats be kept in commission for the training and instruction of machinists and water tenders of torpedo boat service.
5. That all machinists of the second class be sent to a navy yard for practical work on ships under repair.
6. That warrant machinists be placed upon the same footing as regards pay and rank and emoluments as given other warrant officers.
7. That a special rate of pay be allowed those petty officers in the engineering department who qualify as water tenders of torpedo boats.

THE GROWTH OF MACHINERY IN CARGO STEAMSHIPS.

In the last twenty years the amount of machinery placed in cargo boats has multiplied to a very large extent, and the necessity has become evident for the engineer in charge and his assistants to be as qualified as the more advanced rules of the Board of Trade, regulating their initial training and examination, demands. At the commencement of the time referred to, and indeed for some years after, with the exception of steam reversing and steam turning gear, the staff on board had little to trouble them outside the main engines. Certainly, steam was in occasional use for capstans and steering gear, but as the vessels were of small size compared to those now in vogue, the inclusion of such machinery was by no means universal. Forced draught and other modern elaborations were rarely seen. At the present day, however, we frequently find in a first-class tramp steamer, besides a larger set of engines than many an old P. & O. liner pos-

sessed, engines for reversing, for turning, for forced draught, for centrifugal pumps, feed pumps, auxiliary pumps, ash hoists, for electric lighting, etc., many of which are in duplicate. To these add such trifles as evaporators, feed heaters, feed strainers, reducing valves, etc., and there can be small cause for wonder that the spare time of the engineers in charge has been much encroached upon.

Both electric lighting and refrigerating machinery, which latter represents another special phase of our change and improvement, have become so largely adopted that special rules for their fitting and subsequent examination have been formulated. At the present time over 285 vessels are recorded as fitted with refrigerating machinery, and their number is gradually growing. The work on these is so extensive and demands such special knowledge and attention that it is entrusted to a separate staff.

The machinery of cargo boats, especially since the practical abolition of the masts, has become of paramount importance. It may not, therefore, be out of place to predict a time when the master will also act as chief engineer. A step in this direction might be taken by allowing engineers to pass an examination and receive a certificate for proficiency in navigation in the same way that masters and mates are now enabled to pass on in steam engineering.—J. F. Walliker, in Cassier's Magazine for November.

A DOG STORY.

There is a small boy living in this city who, if he doesn't lose his life through just retribution, will grow up to become a great financier, declared Jones. "For some time my wife has possessed a yellow pup that has no earthly excuse for living. But she thinks he is the finest dog in the city and spends a good deal of time caressing him. Finally the dog worship became so unbearable to me that I resolved to end the nuisance. Chancing to meet a bright-looking small boy one day I said to him;

"See here, boy, do you want to earn a dollar?"

"Sure," said he.

"Well, then, said I, you go up to my house, watch your chance and steal the yellow cur that you will find hanging around there. When you get him, bring him down to my office and get your dollar."

Within two hours the boy was back with the cur tied to a rope.

"What will I do with him boss?" he asked, after I had paid him.

"I don't care," I snapped; "drown him if you want to."

"That night I discovered my wife in tears, and I was informed between sobs that poor dear little Fido was missing. The next day she had an advertisement inserted in all the papers offering \$10 for his return. The third day she met me joyfully at the door and announced that Fido had been found.

"Where?" I asked, concealing a groan.

"A little boy brought him back," she answered.

"What kind of a boy?" I asked, suspiciously.

"A small boy, with the most honest face I ever saw on a little chap. I gave him \$10, it being all I had, and told him if he would go down and see you that I knew you would be glad to add \$5 to it."

"But the boy didn't show up. As a matter of fact, I hadn't the slightest idea he would. I wouldn't mind giving him \$5 if he would call."

D. F. P., Chicago.

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NOTES.

THE American yacht Lady Francis is the largest yacht in the world driven by gasoline engines. She has two engines of 30 h. p., giving a minimum speed of 10 knots. Her gasoline reserve is sufficient for a voyage of 1,000 miles.

FROM the returns compiled by Lloyd's Register of Shipping, it appears that, excluding warships, there were 477 vessels of 1,414,120 tons gross under construction in the United Kingdom at the close of the quarter ended 30th September, 1901.

THE British Admiralty is making experiments off Portsmouth with the Temperly-Miller marine cableway for coaling ships at sea. The device is a combination of the Temperly transporter and the Miller conveyor, already in use in the United States. Great secrecy is being maintained in regard to the experiments. It is claimed that the difficulty of keeping the cable taut is overcome in the new device.

OF the 76 responses to the request of the Navy Department for opinions as to superposed turrets for battleships 33 are in favor of the minority plan and 23 support the majority reports opposing turrets and favoring broadside batteries. Among those who recommend the adoption of superposed turrets in future battleships are all the officers at the Naval War College, at the training station at Newport, at the torpedo station, and at the gun foundry.

THE following are the corrected passages covering faulty portions of "next door neighbors," in the MARINE RECORD of Oct. 17, 1901. They are numbered according to the paragraphs in which they will be found.

1. laundresses.
2. who were also worrying. such had been convened—(this G. C. M. O. 37 of 1886 states.)
3. quarter-deck from below," and there K. charged him with "disrespect" in appealing to J. and "told him—1897. See MARINE RECORD—
4. could have been affected.

THE Joseph Dixon Crucible Co., Jersey City, N. J., have sent us a brochure, having reference to their graphite preparations for steam, gas and electric automobiles, and containing some interesting letters from those who have used them. The question is frequently asked "What is Graphite?" The answer is given in the book as follows: Graphite is one of the forms of carbon. It is sometimes called blacklead or plumbago. Graphite is not affected by acids, alkalies, or any known chemical. It is used in a thousand different ways. Dixon's pure flake graphite, which is used in the manufacture of Dixon's lubricants, comes from the company's mines at Ticonderoga, N. Y., and is considered by machinists, engineers, and experts on friction as the most perfect solid lubricant known. It is therefore pre-eminently the most useful article ever offered as a lubricant for the working parts of automobiles. Mr. J. S. V. Bickford, a European authority on lubricants, who has lately been investigating the subject of graphite lubrication, says: It should be pointed out that there are very few graphites on the market in the least suitable for lubrication except in very rough work. The only one with which I am personally acquainted is that sold by the Joseph Dixon Crucible Co., as Pure Flake. I have had this chemically examined, and what is not carbon appears to be mica, and the residue, after firing in a muffle seems still to possess high lubricating qualities. The above quotation is interesting as showing the value of Dixon's pure flake graphite as a lubricant and its world-wide reputation.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising or setting will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the sun's setting. The bearing may be taken when the sun's center is on the horizon, rising or setting. The elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation, or the total difference between compass and true, or geographical bearings.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
Oct. 24	... E. 15° S. = S. 6½ E. =	E. by S. ¾ S.	
Oct. 28	... E. 17° S. = S. 6½ E. =	E. by S. ½ S.	
Oct. 31	... E. 19° S. = S. 6½ E. =	E. by S. ⅓ S.	

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION
LAKE MICHIGAN, LAT. 44° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
Oct. 24	... E. 16° S. = S. 6½ E. =	E. by S. ½ S.	
Oct. 28	... E. 18° S. = S. 6½ E. =	E. by S. ⅓ S.	
Oct. 31	... E. 20° S. = S. 6½ E. =	E. by S. ¼ S.	

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
Oct. 24	... E. 17° S. = S. 6½ E. =	E. by S. ½ S.	
Oct. 28	... E. 19° S. = S. 6½ E. =	E. by S. ⅓ S.	
Oct. 31	... E. 20° S. = S. 6½ E. =	E. by S. ⅓ S.	

LAKE SUPERIOR, LAT. 48° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
Oct. 24	... E. 17° S. = S. 6½ E. =	E. by S. ½ S.	
Oct. 28	... E. 20° S. = S. 6½ E. =	E. by S. ⅓ S.	
Oct. 31	... E. 31° S. = S. 6½ E. =	E. by S. ⅓ S.	

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

ANOTHER ICE CRUSHER.

The Milwaukee Evening Wisconsin has the following under recent date:

"After announcements and contradictions covering a period of several seasons, the Ann Arbor Railway Co. has at last practically arranged for the construction of a powerful steel car ferry designed to maintain an open channel between Frankfort and Menominee during the winter months. The design is to cross Green Bay via the Sturgeon Bay canal, and it is intended that she shall be able to break through the heaviest ice that may form, in windrows or otherwise. The No. 5, when built, was designed to accomplish this work, but her power, which consists of the forward engines removed from the Nos. 1 and 2, proved inadequate for the task. The use of these engines, which was determined upon as a matter of economy, proved to be a great mistake, as the hull of the car ferry is said to be strong enough in all respects for ice-breaking purposes.

"The new car ferry will be of about the same length and beam as her predecessors, but the hull will be deeper. Thus, in order that she may utilize the Sturgeon Bay route, it will be necessary to create a channel of at least 20 feet depth, and an appropriation for this purpose will be solicited at the

next session of Congress. The plans call for an over-all length of 287 feet, 54 feet beam, and track capacity for 24 cars—the same number that each of the others carry. Her engines are to develop 5,000 horse-power. This will make them, it is said, about twice the size of those in the Pere Marquette No. 1.

It is given out that the car ferry will be built at the American Ship Building Co.'s Globe Iron Works plant in Cleveland. The work of construction will not be commenced until about June next because of contracts now on hand, and she will therefore not be ready for service until late in the fall of 1902. The steamer's cost is placed at about \$300,000, and the Ann Arbor officials have the utmost confidence that she will be able to force a passage through the Green Bay ice at any and all times. It is about time that their hopes were realized, as they have already expended many thousands of dollars in futile efforts to establish this winter route.

"In this connection, it is intimated that the order for the new car ferry will insure the extension westward of the Menominee & St. Paul railway."

Notwithstanding the foregoing, it is not learned that any contract has yet been closed with the American Ship Building Co.—ED. M. R.

DISCUSSION OF MISSISSIPPI RIVER IMPROVEMENT SYSTEM.

A paper, which was read before the International Engineering Congress, at Glasgow, (Waterways and Maritime Works Section) last month, entitled, "The Improvement of the Lower Mississippi River," by J. A. Ockerson, was published in full by the Nautical Gazette, New York. The discussion which followed was interesting.

Mr. Whiting, referring to the fact that at the present day dredging on the Mississippi was carried out by means of water jets, said it was a fact that when the dredgers are provided with Mr. Bates' cutters, the output was very much greater than was obtained by the water jets.

Mr. W. H. Wheeler asked why more use had not been made of the transporting power of the water instead of removing the material. He paid a great deal of attention to the subject some few years ago, and for the last few years he had had in operation an eroding dredger, with which he had deepened a number of shallows in a river where the material used to cost something like 1s. 6d. a yard for removing; but which was now removed for about ¾d. per cubic yard. It seemed to be a very economical way of deepening the river to stir up the material and make the water do its own transport. Then another question was, Why stone was used for the mattresses instead of clay? Stone was expensive, and clay was much better for the purpose. In the Fen rivers large mattresses were not used, but fascines about 6 ft. long and 1 ft. in diameter. He had drained a river with a depth of 20 ft. at low water, and a current of four miles an hour, without any trouble with the fascines. The fascines should be laced together, and the quantity of earth be more than the weight of the fascines. Some of the work on the Fen rivers had been done for more than three-quarters of a century, and it stood the heavy wash of steamers of several thousand tons, and a very large fleet of fishing trollers, which are always running into the banks.

Mr. William Brown, of Woolwich, said that with regard to better work being done by cutters than by water jets, his firm had constructed 10 or 12 dredges a year, and never two alike, and he thought it would be agreed it was hardly possible to say that one dredger was better than another. Each dredger was made for the local conditions with which it had

to deal. With regard to Mr. Bates' system, the results brought out on the previous day were very good, particularly in dealing with dense clay. It was quite possible for builders in this country to build a dredger of 7,500 t. to do 8,000 tons an hour.

Mr. Vernon Harcourt thought one of the reasons why the cutters were suppressed was on account of the trunks of trees in the Mississippi, and what were called "snags." It was found where bars had been recently formed, chiefly of land, that the water jets stirred up the material sufficiently well, and gave a better result than the cutters, which were liable to be damaged by any obstacles which might happen to be amongst the bars. He could hardly believe that the American engineers would use stone for the mattresses if clay did quite as well, and if it was cheaper.

The chairman said the mere statement of the immensity of the problem of the Mississippi was in itself most interesting to see how the American engineers had adapted local materials to their requirements in the construction of the enormous mattresses.

MARINE PATENTS.

684,429. Visual indicator for submarine boats. John P. Holland, Newark, N. J., assignor to Electric Boat Co., of New Jersey.

684,486. Adjustable rudder. Elijah F. Wees, Point Pleasant, W. Va., and William H. Martin, Galipolis, O.

684,697. Storage battery for boats. Robert M. Lloyd, New York, N. Y., assignor to the Electric Boat Co., New York, N. Y., a corporation of New Jersey.

684,748. Transporting apparatus. Alexander K. Finlay, New Orleans, La.

684,749. Ventilating system for vessels. Alexander K. Finlay, New Orleans, La.

A foreign contemporary while condoling with Sir Thomas Lipton over the cup races, Gourock congratulates herself on the fact that Charles Barr, who brought the Columbia so successfully through the ordeal, is a Gourock man. He was originally apprenticed to Messrs. McSymon, the well-known Greenock grocers, but the success of his brother John as a yachtsman induced him to follow his example. Charles Barr was one of the crew of the Clyde 20-tonner Clara on her voyage to America. He also took charge of the American 90-tonner Navahoe on her voyage from New York to Cowes, and sailed the Fairlie-built Minerva to Boston in 28 days. His crowning success has been his management of the Columbia.



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The Republic Iron Co.'s steamers America, Brazil, Thomas Mayham and Chili.

Mitchell Transportation Co.'s steamer Hendrick S. Holden.

Minnesota Iron Co.'s steamer Presque Isle. American Steel Barge Co.'s steamer Alex. McDougall.

Lake Michigan & Lake Superior Transportation Co.'s steamer Manitou.

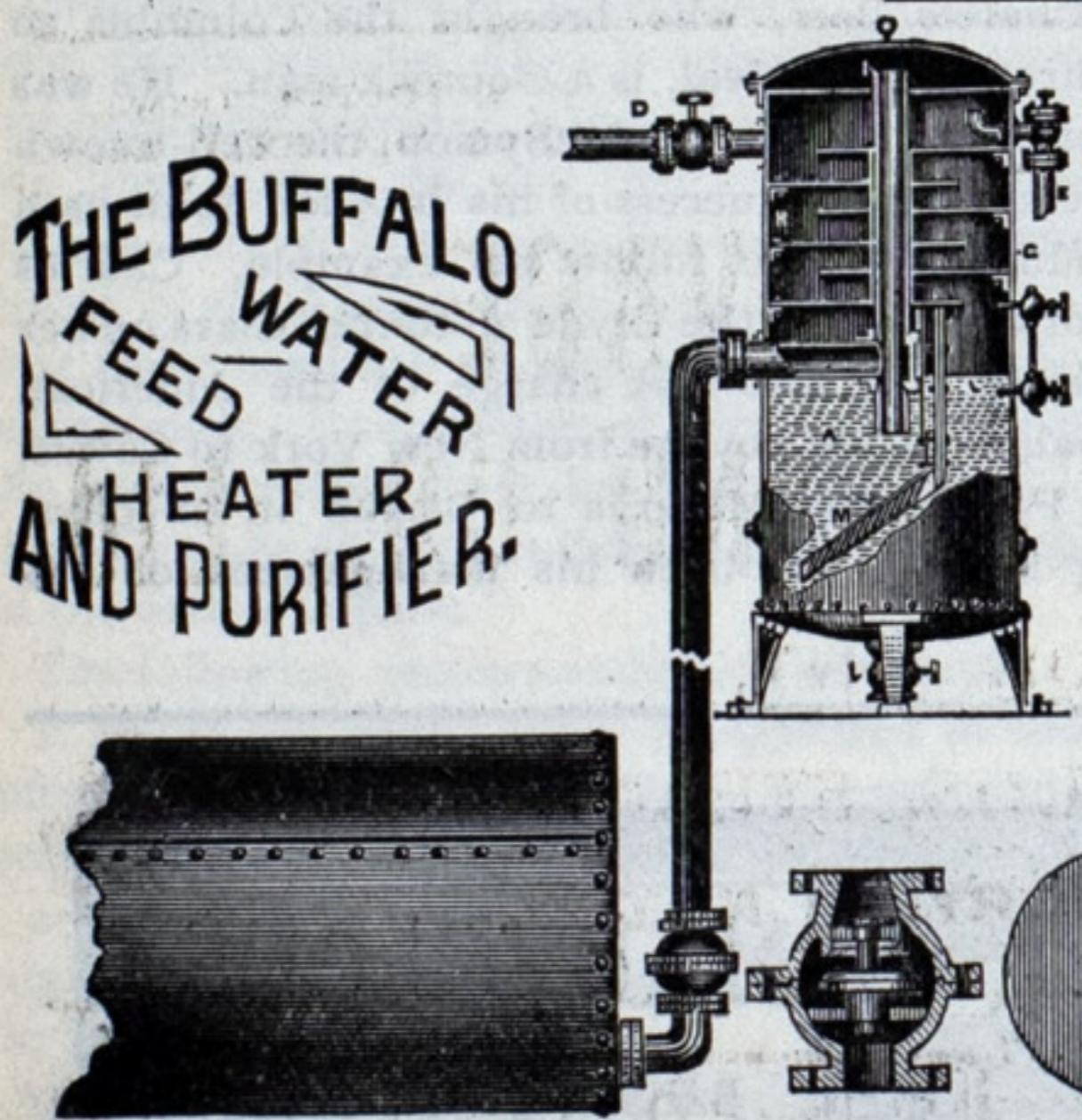
Bessemer Steamship Co.'s steamers S. F. B. Morse and Douglas Houghton.

American Transportation Co.'s steamers John Harper and Alex. Nimick.

Red Star Line's steamers Robert Mills and Wyoming.

Wilson Transit Line's steamers W. D. Rees and Andrew Carnegie.

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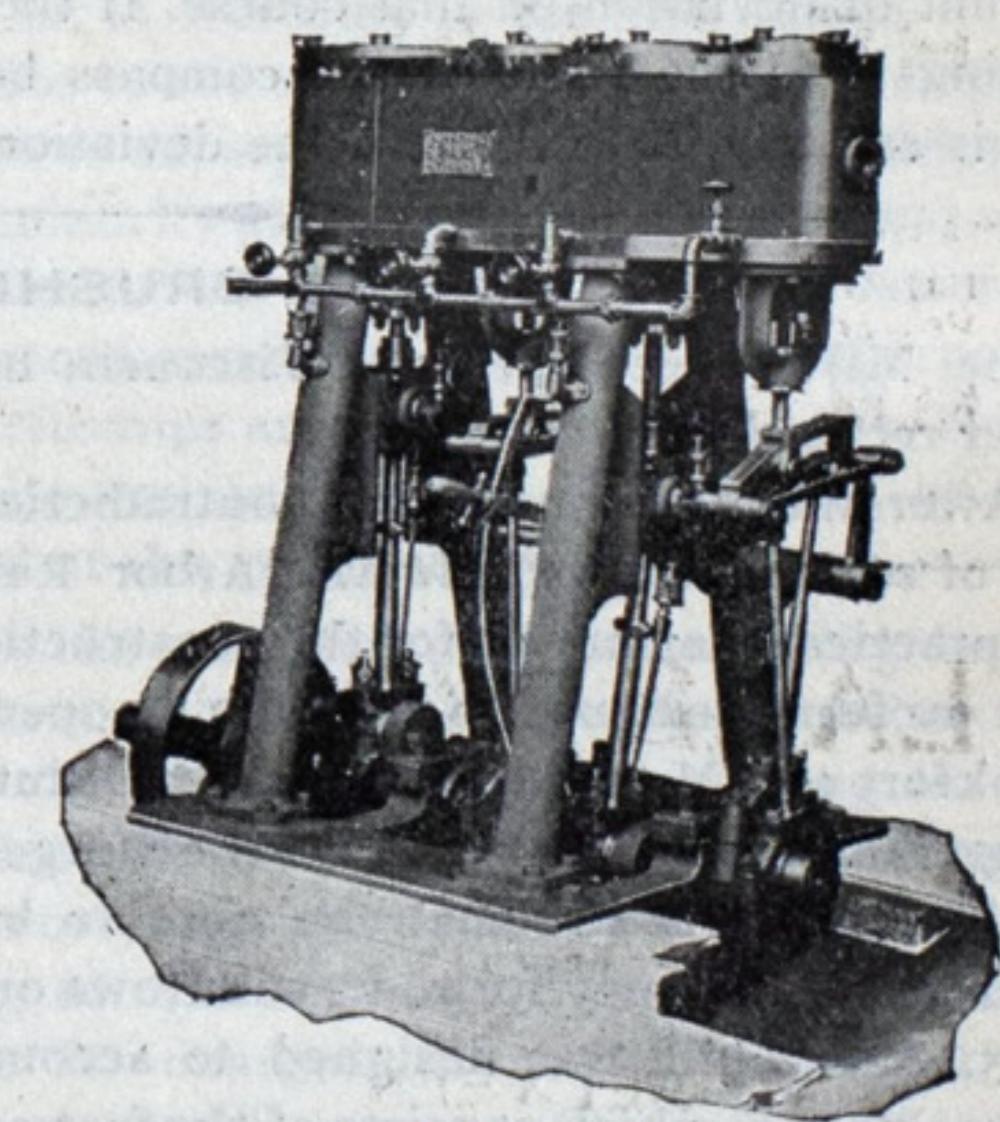
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OCEAN CURRENTS.

I have read with much interest the theory as to deep sea currents, recently published in the MARINE RECORD, from the pen of Capt. Shurburne. The immense volume of water which is continually flowing into the Mediterranean Sea must have an outlet, which can only be afforded by numerous fissures in the sea bed, through which the redundant water must flow into subterranean currents, and onward to the ocean. But the inflowing current, unlike the Gulf Stream, is diffusive, and equals the water of the Mediterranean in temperature. The water of the Gulf Stream may be slightly varied in its composition from the surrounding element through which it passes, but, the geyser theory, as to its origin, is not allowable. If this vast current were forced out from a given point in the ocean bed it would mingle with the surrounding waters. From many soundings in the past the fact is fully established that it is an independent current; even the water beneath its whole course is of a different nature and temperature, proving conclusively that it is not forced upward from the depths of the earth. But while it refuses to mingle with the water of the ocean, throughout its extended course it blends with the atmosphere with surprising persistency. Its lightnings and tempests and diffusing heat, which tempers the climate of the western coast of a continent and numerous islands, all remind us that in the atmosphere may be found the origin of this mighty influence. If the sun has an immense orbit, which is not improbable, the earth which attends it must be moving through space with electric velocity, friction would produce an opening into the actual condition of space through which we are passing and reveal that consuming power called electricity. This theory being considered, is it improbable that some action of the elements in the direction of the Gulf Stream may cause a rift in the atmosphere

which would allow this electric force to penetrate the water with sufficient power to disturb its composition and propel this mighty current with its attending heat and electric action.

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A GREAT ENGINE.

Capt. Thomas Bixby, under whom Samuel M. Clemens (Mark Twain) served as pilot and "engineer" on the old Mississippi river boat Swallow, has given the following description of the engine of the Swallow:

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ORDERS FOR MORE NEW TONNAGE.

Mr. D. R. Hanna, representing the Franklin Transportation Co., which was incorporated at Columbus this week, has placed an order with the American Ship Building Co. for two vessels that will have a carrying capacity of 5,000 tons each. The steamer will be the same size as the steamers Gilchrist and Lake Shore of the Gilchrist fleet, which came out this season. She will be 356 feet keel and 50 feet beam. The barge will be 366 feet keel and 40 feet beam. The steamer, which will be built at Detroit, will be delivered next June, but the barge will not be completed until July. She will be built at Buffalo. The new ships will be up-to-date in every respect and will be among the finest freighters on the lakes. The steamer will carry 4,700 tons and the carrying capacity of the barge will be 5,300 tons. The new boats will be operated in the coal and ore trades between Ohio ports and Lake Superior. Like the boats of the Calumet Transit Co., the new ships will be handled in the office of M. A. Hanna & Co.

The incorporators of the Franklin Transportation Co. are Messrs. D. R. Hanna, C. C. Bolton, S. Hitchcock, John J. Purcell and Andrew Squire. The capital stock is \$300,000. Mr. D. R. Hanna will be president, Mr. S. Hitchcock, treasurer, and Mr. John J. Purcell, secretary.

Capt. A. Gallagher, of the steamer Indiana, reports to the hydrographic department a least depth of water of fourteen feet on a shoal about 600 feet due west of the harbor entrance at Grand Haven.

A yacht of 750 tons burden to be propelled by Parsons turbine machinery, is being built to the order of Sir Christopher Furness, M. P., by Messrs. Alexander Stephens & Sons, Ltd., Linthouse, Govan. She will be numbered among the famous floating palaces.

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page 18.

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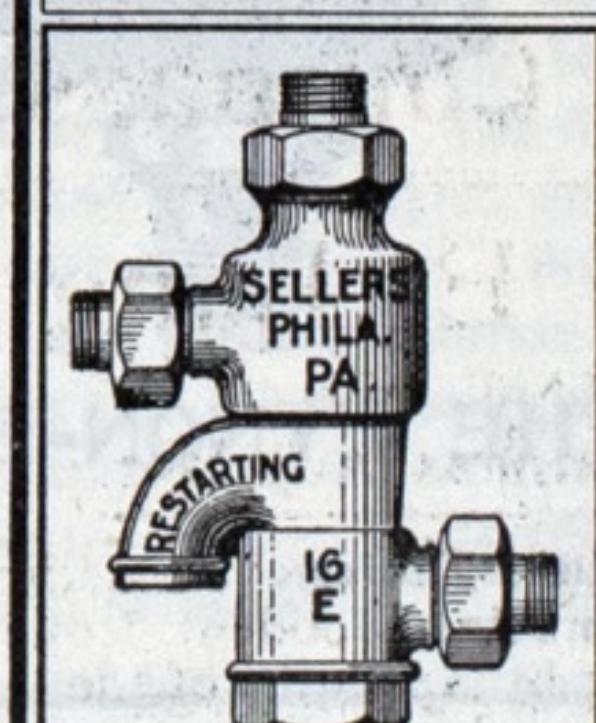


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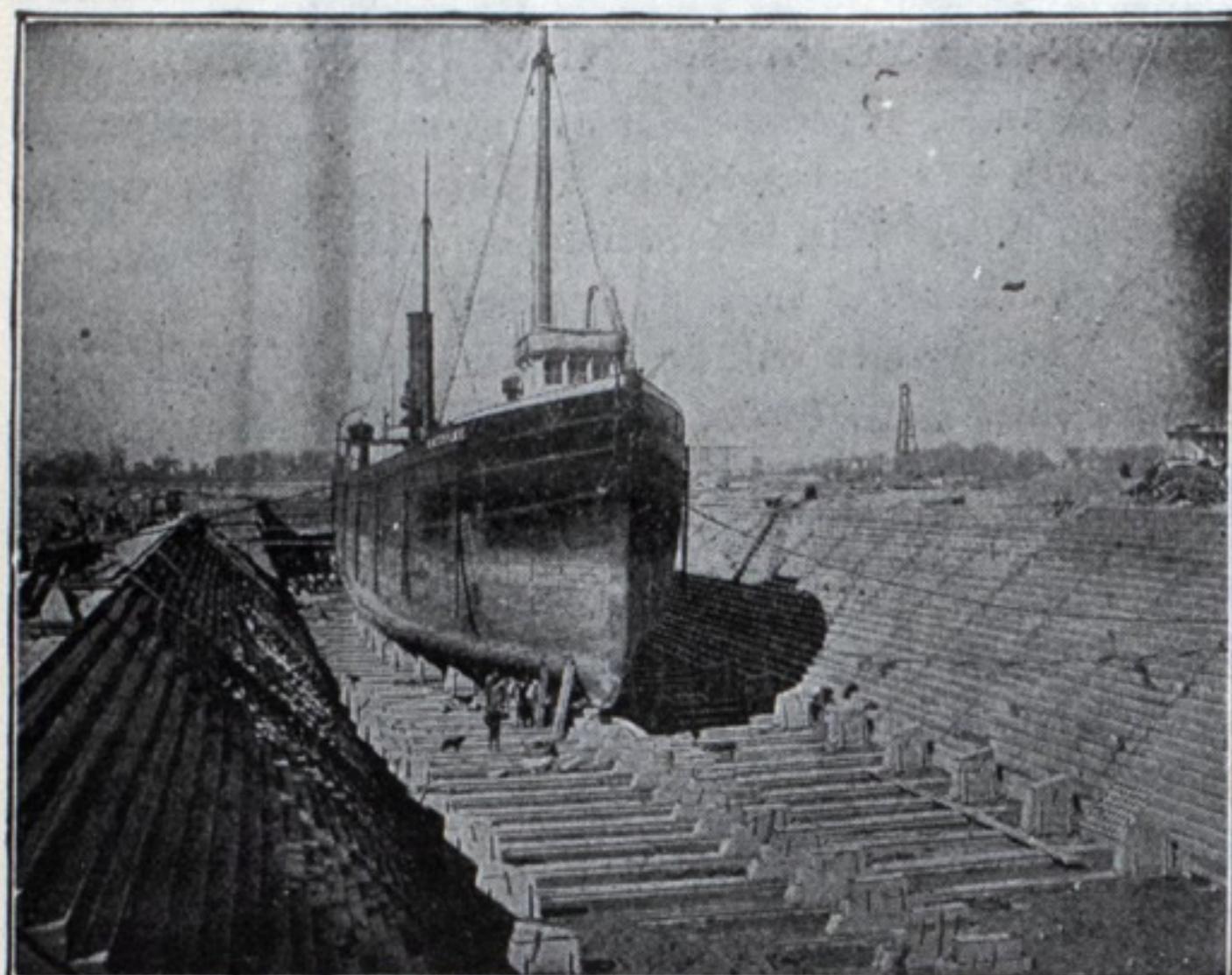
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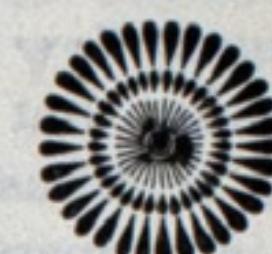
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